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PROPOSED COORDINATED OPERATIONS AGREEMENT FOR THE CENTRAL VALLEY PROJECT (CALIFORNIA) AND THE CALIFORNIA STATE WATER PROJECT

ORIGINAL

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON
WATER AND POWER RESOURCES

OF THE

COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

FIRST SESSION

ON

PROPOSED COORDINATED OPERATIONS AGREEMENT FOR THE CENTRAL VALLEY PROJECT (CALIFORNIA) AND THE CALIFORNIA STATE WATER PROJECT

HEARING HELD IN WASHINGTON, DC
MAY 23, 1985

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NOTE.—The first listed minority member is counterpart to the subcommittee chairman.

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[EDITOR'S NOTE.—Following hearings on the Coordinated Operations Agreement, the committee received letters in support of the agreement from several individuals or organizations. However, the chairman has determined that publication of these letters is not justified based on efforts to constrain publication costs. Copies of the letters and telegrams are on file and can be obtained by writing the committee.]

Letters or telegrams were received from the following individuals or organizations:

John K. Van De Kamp, attorney general, State of California
Assemblyman Charles Calderon, Montebello, CA
Tom Bradley, mayor, city of Los Angeles
Roger Hedgecock, mayor, city of San Diego
Don Roth, mayor, city of Anaheim
John Ferraro, city council, city of Los Angeles
John Flynn, board of supervisors, Ventura County
Harriet Wieder, board of supervisors, Orange County
Robert Townsend, board of supervisors, San Bernardino County
William Aldridge, Eastern Municipal Water District
J. Mark Atlas, Tehama-Colusa Water Users Association
Richard Baird, Las Virgenes Municipal Water District
E. Les Balmer, West Basin Municipal Water District
Phil Barchelor, Contra Costa County
Carl Boronkay, Metropolitan Water District of Southern California
Kenneth L. Davis, Long Beach Water Department
Frank Enos, Jr., Tehama-Colusa Water Users Association
Fred Gilbert, Coastal Municipal Water District
Richard Hansen, Three Valleys Municipal Water District
Howard Hicks, Western Municipal Water District
Alice Q. Howard, Oakland, CA
Leonis Malburg, Central Basin Municipal Water District
Lawrence R. Michaels, San Diego County Water Authority
Theo T. Nowak, Chino Basin Municipal Water District
Stanley E. Sprague, Municipal Water District of Orange County

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PROPOSED COORDINATED OPERATIONS AGREEMENT FOR THE CENTRAL VALLEY PROJECT (CALIFORNIA) AND THE CALIFORNIA STATE WATER PROJECT

THURSDAY, MAY 23, 1985

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON WATER AND POWER RESOURCES,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, DC.

The subcommittee met, pursuant to call, at 10 a.m., in room 1324, Longworth House Office Building, Hon. George Miller (chairman of the subcommittee) presiding.

Mr. MILLER. The Subcommittee on Water and Power will come to order.

The purpose of this hearing this morning is to provide an opportunity for members of the subcommittee to review and start to understand the contents of the Coordinated Operations Agreement between the State of California and the Federal Government. We will begin with our first witness, Hon. Jim Costa, who is the chairman of the Assembly Committee on Water, Parks, and Wildlife from the California State Legislature.

Jim, welcome to the committee. It is good to see you. Delighted to have you here.

[Prepared statement of Hon. Jim Costa may be found in the appendix.]

STATEMENT OF HON. JIM COSTA, MEMBER OF THE CALIFORNIA STATE ASSEMBLY, AND CHAIRMAN, ASSEMBLY COMMITTEE ON WATER, PARKS, AND WILDLIFE

Mr. COSTA. Thank you, Mr. Chairman, it is good to be here.

Mr. Chairman and members of the committee, my name is Jim Costa. I am the chairman of the Water, Parks, and Wildlife committee for the California State Assembly. I want to thank you this morning for the opportunity to speak today on the agreement between the United States of America and the Department of Water Resources of the State of California for the coordinated operation of the Central Valley project and the State water project.

The United States and the State of California entered into the agreement on May 16, 1960, article 16, which recognizes the need for criteria for the coordinated operation of the Central Valley project and the State water project.

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The agreement before you today recognizes that certain basic assumptions of the 1960 agreement require modification due to subsequent developments and changes in the two projects that have occurred over the years.

The most significant of these was in August 1978, a decision by the California State Water Resources Control Board to impose requirements on the water right permits of the two projects pursuant to the board's reserved jurisdiction over these permits.

Decision 1485, that has been referred to, requires that the Central Valley project and the State water project to bypass natural flow and release stored water needed to protect beneficial uses of the waters of the Sacramento-San Joaquin Delta.

The board, at that time, adopted a water quality control plan for the delta and Suisun Marsh, pursuant to its authority under the State Porter-Cologne Water Quality Control Act and the Federal Water Pollution Control Act.

The Sacramento-San Joaquin Delta is one of California's most valuable resources. The Sacramento and San Joaquin Rivers drain almost 40 percent of the State's water, converging at the delta to provide water for the people, industry, recreation, agriculture, fish and wildlife. In addition, the water is exported to about 90 public agencies which have long-term contracts both with the State and Federal Governments.

These agencies serve about one-third of the land area and two-thirds of the population of California. The delta waterways, then, provide a rich repository of aquatic life, including more than a dozen species, both commercial and game fish.

Delta waterways are a major resource in our State for fishing, boating, and scenic enjoyment, while the delta islands are a major resource for agriculture, hunting, and natural gas.

The Sacramento-San Joaquin Delta is greatly influenced by a number of complex interactions. These interactions are both caused by man and caused by nature. They involve the inflow provided by the two river systems of the environment and San Joaquin Valley. These interactions include water exports, consumptive uses, upstream diversions, tidal action, levee failures, pollution, agricultural return flows, and recreational activities, are all recognized factors that, to varying degrees, affect water quality and fish and wildlife resources of the delta. Although no one factor can be singled out as the principal influence, the result is a continuing deterioration of the delta as a natural resource.

For those of us who have supported water development, we have been frustrated for over a decade at the inability of the State to move ahead with a plan that enhances the delta and provides for additional water to be shipped to other regions of California. Issues that have blocked attempts to move ahead in the legislature and at the ballot box include, in my opinion, (1) project impacts on water quality; (2) project impacts on fish and wildlife; and (3) the whole concept and public perception as it relates to the issue of water conservation.

I believe, Mr. Chairman, and members of the committee, in my opinion, that the Coordinated Operations Agreement, if ratified by this Congress and signed, would help to resolve some of these

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issues so that we might be able to go and move ahead with some of the more thornier water problems that we have in our State.

As chairman of the assembly committee on water, parks, and wildlife, not only do I represent the Central Valley but I have concerns for the broader ramifications of water problems in every region of the State. I don't believe that we can refute the charge that the operation of Federal and State projects degrades water quality and adversely impacts fish and wildlife. For instance, we know that the operation of export pumps of the two projects in the south delta at times reduce the water and levels for tidal circulation, so that beneficial use of the water by local farmers and residents is oftentimes dramatically affected.

Operation of the pumps reverse the direction of waterflow in the western delta, thereby causing water to be degraded by ocean salinity intrusion. Drawing with the flow of the water are large numbers of fish, fish larva, and eggs, particularly striped bass. The reverse flow also forces the projects to use more project water to supply for the maintenance of ocean salinity control. Upstream diversions on the San Joaquin River also impact the south delta.

While operations of the State water project can be modified at times to reduce these impacts, I am confident that the construction of proper facilities could eliminate most of these impacts and allow the State and Federal projects to meet delta water quality requirements with less, less project water.

The adoption of the Coordinated Operations Agreement before you today will ensure that both projects—both projects, I emphasize—that recognize their obligations to help maintain the water supply and water quality standards for the delta as set by the State water resources control board.

You are, of course, very much aware of the problems of the agricultural draining in the San Joaquin Valley. These problems also affect our ability to move ahead on various aspects of the State water project.

The financial and programmatic commitment by Federal and State agencies, and the Congress and the State legislature, to address these problems could help the effort to move ahead on the project. Also, irrigation management practices and treatment technologies must be implemented to prevent water quality degradation from occurring.

Previous attempts to move ahead on State project facilities in the delta have also been blocked, in part with the charge that the San Joaquin Valley agricultural community has not used water efficiently. A recent study contracted for by the U.S. Department of the Interior, states that California leads the Nation in water conservation programs.

I believe the agricultural community has played a part in this success by taking great strides to conserve water in the last 10 years—through such examples as lining of ditches and canals, the use of laser land leveling technology, which is common practice, and the improvement of irrigation management techniques. There is more that can be accomplished, however.

I have authored legislation to provide State financial assistance to local agencies for voluntary, cost-effective, capital outlay water conservation programs.

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My colleagues in the legislature are working with me to ensure that the State's conservation programs are improved and expanded. Hopefully, these legislative efforts will provide the evidence needed to refute the charge the agricultural community wastes water, and more importantly, is taking a progressive role to conserve this valuable resource.

With the above assurances, it may be possible, in my opinion, to move ahead with various aspects of the State water project.

I would like to cover one final issue before I conclude. I have heard that there will be attempts to add authorizations for additional facilities for the Federal Central Valley project to this agreement. This must not happen, in my opinion. I know that environment is not Washington, but we have learned that the Christmas tree approach to solving California's water problems does not always work. The addition of other items, in my opinion, would make this agreement hopelessly controversial and could prevent its timely adoption.

Again, I think it is imperative that the agreement before you today is ratified by Congress and signed by the Bureau of Reclamation and the Department of Water Resources.

The implementation of the Coordinated Operations Agreement would be the most significant water policy accomplishment in California in the last 10 years. Why I believe it is the most significant accomplishment in water development in the last 10 years if successfully concluded? Because, in my opinion, it would guarantee minimum flows for the delta, long a concern of bay area legislators.

Second, it would establish Federal recognition of the State's water rights and water quality authority over the Central Valley project, which provides additional insurance for those concerned with this area.

Finally, it would provide a much needed interim water supply to the State. This interim water supply could be used not only to improve water quality in various regions, but also as a source of water for regions that currently are experiencing deficiencies.

Those are truly, in my opinion, significant factors.

Ensuring the viability of the delta benefits all Californians. The delta deserves attention not only to protect beneficial uses within the region, but to ensure the export water needs of the two projects.

California law dictates that delta water requirements for reasonable beneficial uses must be met before any water is exported. Conversely, though, the two projects both require good quality water for export to satisfy the contractual obligations of each. Failure to take action on the Coordinated Operations Agreement, in my opinion, finally, will contribute to further risk and damage to the people of California and to the beneficial uses of the entire region.

Thank you very much for your time this morning.

Mr. MILLER. Thank you for your statement.

We have a vote on so we are going to recess here for about 5 or 10 minutes, go vote, and we will be right back.

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Mr. MILLER. The subcommittee will come to order.

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Mr. Lehman.

Mr. LEHMAN. Mr. Chairman, I couldn't let my assemblyman off that easy. I want to welcome Jim to Washington today.

I just want to ask you, as you read the proposed COA, is there any State legislation required or anticipated under this agreement?

Mr. COSTA. I don't believe from a legal standpoint there is any legislation required, although, frankly, as this subcommittee proceeds with its deliberations over the agreement, it is my feeling that we ought to move similarly in the legislature with a resolution that affirms the agreement that has been reached as long as there aren't any dramatic changes that are made.

It would be my intention to move forth with a resolution recognizing the intent of the agreement and supporting it.

Mr. LEHMAN. As far as you know, then, the agreement is consistent with the Burns-Porter Act?

Mr. COSTA. That is my belief and understanding, correct.

Mr. LEHMAN. Thank you very much.

Mr. MILLER. Do you have any questions?

Mr. PASHAYAN. Welcome to Washington. We were chatting earlier that there is less of Jimmy Costa now than there was 2 or 3 months ago. He has gone on a strict regiment of eating less and riding his bicycle more.

Mr. LEHMAN. I thought he was terminally ill.

Mr. PASHAYAN. I do not think so. He is pretty robust.

Mr. COSTA. I have gotten down to fighting weight.

Mr. PASHAYAN. I think he looks pretty robust. I want to observe that the chairman of the subcommittee is listening very, very closely to this conversation. [Laughter.]

Mr. MILLER. For water or what?

Before this gets any worse, Jim, thank you very much for your participation. We expect to stay in touch with you as we go through the deliberations on the COA and also on the other matter that we discussed with respect to Kesterton to make sure that we dovetail our operations here.

Mr. COSTA. I think that is highly appropriate. We have water problems from region to region throughout the entire State. I think it behooves both the State legislature and the Congress, the congressional representatives, to work as closely as possible and dovetail our efforts so that we don't duplicate it. Frankly, so that we can find means in which we can resolve many of the water issues that for so many years have divided and separated us in various parts of the State.

I really believe that there is the ability not only today, but tomorrow, to correct many of these problems. I think we begin with the first step this morning by getting the Coordinated Operations Agreement behind us, and with that I think we will find the road much clearer in attempting to deal with other aspects of water quality problems throughout California.

Mr. MILLER. Thank you.

Mr. COSTA. Thank you very much.

Mr. MILLER. Next we will hear from a panel made of Dave Kennedy, the director of the department of water resources, the resources agency of the State of California, and David Houston, Re-

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gional Director of the Mid-Pacific Region, Bureau of Reclamation, U.S. Department of the Interior.

Gentlemen, welcome to the committee. David, we will hear from you first.

[Prepared statements of Hon. David N. Kennedy and Hon. David G. Houston may be found in the appendix.]

PANEL CONSISTING OF HON. DAVID N. KENNEDY, DIRECTOR, DEPARTMENT OF WATER RESOURCES, STATE OF CALIFORNIA, AND DAVID G. HOUSTON, REGIONAL DIRECTOR, MID-PACIFIC REGION, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

Mr. KENNEDY. The other David?

Mr. MILLER. Let's start with Kennedy.

Mr. LEHMAN. Dave and Dave show?

Mr. MILLER. The Dave and Dave show.

Mr. KENNEDY. Thank you, Mr. Chairman. My name is David Kennedy. I am director of water resources for the State of California. You have already thrown us a little off. We had a prepared approach to this, I was going to defer to David Houston to begin, but I would be happy to give you an overview from our standpoint. I do have a prepared statement that, in the interest of your time, I would like to just submit for the record, if I may.

Mr. MILLER. Without objection.

Mr. KENNEDY. There is, of course, this agreement that we have now, which represents a great many years of effort to achieve coordinated operations between the two projects. Many people have observed that it is a rather complicated subject, that there is a lot of detail here, there's an awful lot of studies underlying it.

I would like to make essentially two points about what this agreement does. First of all, it provides a common set of criteria for operation of the projects with respect to protection of the delta. That is, we are agreeing on specific numbers that the two projects will be operated to protect the delta. These numbers come out of Decision 1485 of the State water resource control board. So, for the first time we are putting aside the argument about common delta protection numbers, and they are in the agreement.

The second thing the agreement does is it provides a basis for coordinated operation of our facilities. Between our project and the Central Valley project there are a large number of reservoirs, some big pumping plants in the delta, and we have always had this issue as to how do you get maximum efficiency of the use of these facilities that have been paid for by the public.

We feel that with this agreement and with the wheeling and exchange agreement that it calls for, we will be achieving essentially full integration of the operation of these facilities. That is, we will be operating at about 98 percent of what we could achieve if the two projects were operated under a single entity. So, in these two areas of common delta criteria and coordinated use of all of our facilities, we think we have made tremendous progress. That is really the essence of what all these pages and numbers and all these long studies are all about.

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I should call your attention to something that is not in the agreement and this is the protection of Suisun Marsh. The standards to protect it are presently under negotiation between the local district, the State department of fish and game, and our two departments, the Bureau and my department. We have provided in the COA for amendment to include protection of Suisun Marsh when we have that agreement worked out.

We think we are very close to finishing it. We anticipate right now that sometime this summer we will complete negotiations on Suisun Marsh and that we will then be amending agreement to include that. We anticipate that for the Bureau to fully participate in the protection of Suisun Marsh we will need additional authorization of facilities and appropriations.

One other point is that in this agreement we do not in any way affect the rights of third parties. We are making no representation that by settling our own problems we are somehow settling anybody else's claim against us. The delta interests have whatever rights without the agreement, they have with the agreement. So, some of the text in my statement that was submitted, if read out of context would sound as though we have agreed as to how much water we can export.

I want to make clear that it is with respect to our two projects, but it is not with respect to the rights of third parties. The way that these two projects will be operated is the delta protection comes first and then whatever is left over we divide up to use in our two service areas.

I think, Mr. Chairman, I would be pleased to rest at that point and answer questions.

[EDITOR'S NOTE.—Additional material submitted by Mr. Kennedy entitled "The 1976-1977 California Drought—A Review" may be found in the committee's files of today's hearing.]

Mr. MILLER. Mr. Houston.

Mr. HOUSTON. Thank you, Mr. Chairman, and members of the committee. My name is Dave Houston. I am the Regional Director for the Bureau of Reclamation, Mid-Pacific Region, in Sacramento.

We appreciate the opportunity to be here today to give you the Department of the Interior's position regarding the Coordinated Operations Agreement. Dave Kennedy has outlined the highlights of the agreement as to how it affects both projects.

I might just mention that we do have some material for the record, Mr. Chairman, and with your permission, would like to submit. We identify that later in the statement.

Under the agreement that is proposed before you here today, we have found a way to achieve the water quality in the delta and still provide for meeting the goals and objectives of both water projects—the State water project and the Central Valley project.

The formula that is established in the agreement provides for an equitable sharing of water resources, recognizes the water development strategies that have been adopted by both projects, and allows us to meet all of our obligations.

There are a couple of points Dave did not mention which I would like to focus on. First of all, the history of the development of the projects has been fairly complex, not only the Federal projects but a lot of the private projects that have developed. The water rights

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in the San Joaquin and Sacremento Basins have never been fully adjudicated. Many of the permits which the water projects have were received at a time when there was no State water resources control board, and that is when water rights were issued by the State water rights board. However, all of the water rights for the State water project and most of the rights for the Central Valley project are now under the jurisdiction of the State water resources control board and regulated under State law.

Through the methodologies that are used in the Coordinated Operations Agreement, we recognize the principle—first in time, first in right. That is, the first facilities constructed would have first access to water supplies in competition between the two projects, and as Dave mentioned, I would like to emphasize, not with respect to any claim of third parties. These are only relative priorities as between the two projects, where we begin with the priority on the date a project was actually constructed. By doing it that way, we have been able to firm up what the relative entitlements of the two projects would be, for both in-basin obligations, the areas of origin, and the delta as well as the export capability of the two projects.

We believe that the Coordinated Operations Agreement provides an institutional framework for operating the two projects conjunctively to maximize the benefits to the Federal Government as well as to the State. We have a circumstance where the State water project has more conveyance capacity than they have water supply developed. In the Central Valley project, we have more water supply developed than we have conveyance capacity to be able to deliver.

The relationship which is proposed under the Coordinated Operations Agreement would allow us to integrate the two projects to use both the water supply as well as the conveyance capacity on behalf of the entire State. The State contractors could help pay for the Federal investment in storage facilities. The Federal contractors and the Federal service area would be able to help to pay the State invested costs of the State aqueduct, in which case, we fully maximize the use of the facilities that we currently have in place out there.

In summary, we believe the Coordinated Operations Agreement does a number of things. First, it enables two projects to conserve water resources; it enables reduction of ground water overdraft conditions, in both the Sacremento and San Joaquin Valleys. We believe it fosters environmental protections for the delta and the bay and the other waters of the State of California.

It has the additional advantage of providing additional time for some of the planning that needs to be done to be certain that water development in California takes place in an environmentally and economically sensible way.

We believe that the Coordinated Operations Agreement is a major step in securing predictability, environmental protection, and economic stability within California and would encourage its adoption by the Congress.

I appreciate the opportunity to be here today and look forward to responding to any questions that you might have.

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[EDITOR'S NOTE.—Additional material submitted by Mr. Houston pertaining to the Central Valley project may be found in the committee's files of today's hearing.]

Mr. MILLER. Thank you very much.

What is the estimate of the amount of water that will be required to ensure the D-1485 standards under this agreement?

Mr. KENNEDY. It depends upon what type of water year we have, Mr. Chairman. Under the criteria, there are different types of years varying from wet to critical. For instance, we are in a dry year out there right now, and the criteria provide for less outflow during critical years than during wet years. So, I think the minimum in any 1 year is over 4 million acre-feet. But in the wet years or in normal years, it is quite a bit more water than that.

Mr. MILLER. But when you call upon the so-called project water to meet those standards in those years, where is that water going to come from?

Mr. KENNEDY. Some of it will come from storage and some of it will come from natural flows that are not diverted.

Mr. MILLER. How do we calculate it in simple terms, if we can, with respect to the 1 million acre-feet that people keep talking about that will be freed up by the Coordinated Operations Agreement? Is that the 1 million acre-feet net after all the contingencies of the COA are met?

Mr. KENNEDY. I think it would probably be more appropriate if Mr. Houston responded to that, that particular water is Federal water.

Mr. HOUSTON. If I might, it is a difficult question. It is one that we anticipated. The difficulty in computing how much water it takes or how much yield would vary in the projects is somewhat unpredictable. We have estimated that an average of 800,000 feet more than required to meet the "Tracy Standards" is required to meet D-1485 standards. We do not have agreement between the parties involved that that is the quantity of water. The reason for that is that you have to assume an operating relationship between the two projects so that you know how much water supply you actually have. In reality, you would be operating competitively as opposed to cooperatively and the overall efficiencies of the projects would be reduced.

As Dave mentioned, the quantity of water required would vary depending upon the water year, and it would come from a combination of sources in the operations of the two projects. In essence, under State water law, the first obligations are to areas of origin in-basin uses, exports can only be made after in-basin uses are satisfied. Basically, that means that all of the projects are obligated to meet those in-basin demands before the water projects can export anything. So, it would come from a combination of sources.

Mr. MILLER. I don't quite understand the answer.

Mr. LEHMAN. Will you yield, Mr. Chairman?

Mr. MILLER. Yes, I yield to the gentleman.

Mr. LEHMAN. Is the CVP going to have more or less water to export once the COA is signed?

Mr. HOUSTON. The Central Valley project will have more water supply to sell. The estimate of water available to the CVP over and above that required from the outflow is approximately 1 million

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acre-feet in addition to our current obligations of 7.2 million acre-feet.

Mr. KENNEDY. I might comment, if I might, though, of that 1 million acre-feet, my understanding is that about half of that is for use in the areas of origin. It is not 1 million acre-feet of new exports. It is probably half of that would be used in the American River and Sacramento River service areas.

Mr. MILLER. Now we have half as much water as we had a week ago.

Mr. LEHMAN. You lost 500,000 acre-feet already this morning.

Mr. HOUSTON. A point of clarification, if I may, we would have a million acre-feet to market. However, our first obligation would be to meet the in-basin demands. So the 1 million acre-feet under the Central Valley project would go to fill out the demand in areas like the Tehama-Colusa Canal service area, other places in the areas of origin, and then, the remainder over and above that, would be available for export.

Mr. LEHMAN. If the gentleman would yield further?

Mr. MILLER. Sure.

Mr. LEHMAN. The 1 million acre-feet that is available, you are saying your first obligation is to meet demands in the area, and you estimate those at a half-million, correct?

Mr. HOUSTON. The estimates we have vary. We have requests in for roughly 500,000 acre-feet. There is a question regarding how much could actually be put to use in those areas. Estimates range from roughly 150,000 acre-feet up to 500,000 acre-feet. We are now initiating an environmental impact statement process and a review of the marketing plan for the Sacramento Valley which would further define what those specific needs are and how we would meet those needs.

Mr. LEHMAN. That is water that you will sell?

Mr. HOUSTON. That is water that would be marketed, that is correct.

Mr. LEHMAN. In down years when there is less water and you are required to meet the standards setup by D-1485, will that be the water that you use first?

Mr. HOUSTON. The water that would be used—I guess I would say we pool all of the water that is available in the Central Valley project. All of the contracts provide for shortages in dry or critically dry years. When we talk about a firm water supply, that does not necessarily mean that in each and every year you end up with that exact quantity of water. In a dry year, certainly reductions would take place.

The total water supply—the total operation of the project—would be used to meet water quality standards, and we would still be able, on a firm basis, to have a quantity of water that we would market on that basis.

I am not sure if that got directly to your question.

Mr. LEHMAN. What I want to know is whose water you are going to use to meet the standards?

Mr. HOUSTON. The water which will be used to meet the standards would be a combination of State water project water which they otherwise would not divert from natural flow out of the Sacre-

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mento system, out of the delta, as well as storage releases to the extent we had to maintain the outflow requirements.

Mr. LEHMAN. My question is this: You have contractors out there who contracted for water. Do you anticipate shorting all of them in equal amount or do you take the last one in and let them eat it all?

Mr. HOUSTON. No, it would be a shared responsibility across the board. I might mention that the outflow obligations, the amount of water on a firm yield basis that we would market would not change from the way the project was authorized, in our judgment. All of the contracts currently provide for shared shortages throughout the Central Valley project, in-basin as well as out-of-basin users.

Mr. COELHO. Will the gentleman yield just on that very point?

Mr. MILLER. Sure.

Mr. COELHO. Are you saying in effect that it will be shared responsibility, or are you saying that percentagewise everybody will be cut the same amount in a short year? I just want to be clear on that. You answered Rick's question by saying that the last person in won't be the one who gets cut the most, so everybody will share it.

Are you saying everybody will be cut 5 percent, everybody will be cut 10 percent, or is it going to be this group is cut 50 percent and this group is cut 10 percent, or what do you mean by that?

Mr. HOUSTON. The contracts that have been executed historically provide for shared shortages; that is, everyone is cut the same amount.

Mr. COELHO. The same amount.

Mr. HOUSTON. With the exception of some of the M&I contracts, as I recall, which have a little firmer supply because municipal-industrial users were having more difficulty.

I would like to go back and validate for the record whether there are other special circumstances in that, if I might.

Mr. COELHO. But, basically, this COA does not change any of that? That the policy of the past will remain, that everybody shares equally percentagewise?

Mr. HOUSTON. That is correct.

Mr. MILLER. So there will be in fact no distinction between a contract you will sign in the future and a contract you have already signed and executed in the event that water is needed to meet these standards in a dry, critical year. You will have the resources of those past contracts to call upon?

Mr. HOUSTON. That is correct.

Mr. MILLER. All right.

Another issue that has been raised is the question of the duration of the COA. Now, what happens down the road—and I am looking on page 23—it talks about if the parties fail to enter into a contract referred to in subarticle 10(h)(1), then either party may unilaterally terminate this agreement. What happens there?

Mr. HOUSTON. What we expect to have happen, Mr. Chairman, is once we have the authority to execute the coordinated operating agreement, we would proceed with all the actions necessary to make the agreement fully operative. One of those provisions would be to be able to share the joint facilities to use in the way we have

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anticipated, to help to pay for both projects' cost as well as to deliver the water supplies contemplated.

If the parties are unable to reach agreement under that circumstance, we can go into negotiations essentially over a 1-year period. Absent being able to reach agreement on how we would operate, both parties have the ability—not the obligation, but the ability—to terminate the agreement.

Mr. MILLER. What kind of agreement do we have, then?

Mr. HOUSTON. The agreement provides for joint operations. Everyone intends to make the agreement fully operational. Our expectations are that we will be able to reach agreement on the kinds of contracts that we expect are going to be needed.

I would defer to Dave Kennedy from the State perspective, whether they see difficulty in being able to execute an agreement.

Mr. MILLER. Let's stay at the Federal level for a moment.

You have requests for 2 million acre-feet out there from various contractors who are looking for water, some of which may be good projects, bad projects, or otherwise—but, anyway, they are looking for additional acre footage of water. Is there anticipation that if we provide the authority to execute the COA that the moratorium would be lifted and that contracts would be entered into?

Mr. HOUSTON. That is correct, we would lift the moratorium and begin negotiating contracts.

Mr. MILLER. Then what happens down the road a couple of years if you cannot work out the wheeling agreements?

Mr. HOUSTON. The agreements, obviously, would have to protect the Federal interest to the extent we have capacity to move water. If we didn't have facilities available, we would not try to bind the Federal Government to a contract that did not have, first——

Mr. MILLER. Let me be more explicit. You sign a 40-year contract for the delivery of water, and those of us who are concerned about in-basin protection have a 5-year agreement that can be terminated at will by either parties.

Mr. KENNEDY. I might comment on that, Mr. Chairman.

In order for them to sign that 40-year contract, they have to have an exchange wheeling arrangement with us, and we are not going to agree to wheel that unless they agree to meet the delta protection criteria. So the whole thing is interlocked.

Mr. MILLER. Are you suggesting that every request for water requires the joint use of facilities? It doesn't does it?

Mr. KENNEDY. Most of the export——

Mr. MILLER. There are a number of contractors who have facilities in place that are looking for an additional quarter of a million acre-feet or half-million acre-feet.

Mr. KENNEDY. The State project is not going to put itself at risk, though, by agreeing to wheel water with an uncertainty as whether the Federal project will protect the delta.

Mr. MILLER. My question is whether or not the Federal Government can engage in these contracts and use its own facilities to move the water as we currently do and bind us legally for the delivery of that water, and then only to find out that perhaps the Coordinated Operations Agreement didn't work out.

Mr. HOUSTON. The only facility with which we have capacity to move a substantial quantity of water, Mr. Chairman, is the

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Tehama-Colusa Canal, which is an in-basin facility. Obviously, an in-basin demand which has to be met by the Federal project as well. From the standpoint of what we could move out of the south delta and the Delta-Mendota Canal, when the San Felipe project comes on line, we will essentially be at capacity in that facility. As a consequence, we could not move additional water south physically without the agreement of the State to move that water on our behalf.

Mr. MILLER. What about the request for 250,000 acre-feet from westlands, can you move that?

Mr. HOUSTON. For the 250,000 acre-feet request from westlands, it is possible to move that—and that would be the total quantity of water in the Delta-Mendota Canal. That is the 250,000 acre-foot block of water which they have been receiving under stipulated agreements for some time.

Mr. MILLER. So that could be turned into a long-term contract, is my point, with the use of existing facilities. One of the theories is that people in the delta will feel comfortable because the Coordinated Operations Agreement is going to provide the guidelines by which exports of water are going to take place. But it appears on its face that the Coordinated Operations Agreement is not exactly chiseled in stone because there is yet another agreement to be reached in the future on the joint use of facilities. So we don't quite have a complete agreement here.

Mr. PASHAYAN. Would the chairman yield?

Mr. MILLER. In a moment, I want to finish making my point.

I am not making that as an accusation. I am trying to determine—we have a partial agreement here which must be—truly is concluded by a second agreement on the joint use of the facilities which makes the whole project efficient so you can do what this part of the agreement says. Is that right?

Mr. HOUSTON. We are going to need to have a joint wheeling agreement to be able to fill the Coordinated Operations Agreement. Our expectation is that we will be fully able to execute such an agreement via those assurances. In that circumstance, we would be able to meet the delta water quality standards as well as provide for additional contracting, provided that the Coordinated Operations Agreement reaches for us, all of us, an agreement on how we will achieve the delta water quality standards. We think that provision is there. There are some additional actions required to fully implement that agreement, one of which is, as you have mentioned, a contract for common use of facilities.

There is still some uncertainty on that agreement but we expect best efforts will lead to an agreement.

Mr. MILLER. My concern is that with regard to the delta, the worst thing that can happen to you is find out that you have engaged in a series of long-term contracts and then to wake up the next morning and find out you don't have what protection the COA will in fact provide.

You are saying that is not possible, but it looks to me like it is. So now my question would be, where do we put in the protection here? Do we make any contract you sign between now and then contingent upon signing the wheeling agreement? Do we make implementation of the COA contingent upon signing the wheeling

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agreement? Where do we get this protection that step 2 is going to in fact take place before any contracts are signed? Whether it is for 2,500 acre-feet or for 250,000 acre-feet, it is of concern.

Mr. HOUSTON. I might suggest the protection that you are seeking, Mr. Miller, is already contracting policy with the Bureau. Exhibit E addended to the agreement reflects the contracting terms that we use to the extent water quality standards were to be found binding upon the project that would not create an obligation on the part of the United States if water had to be recalled for that purpose.

I think if you look at exhibit E to see the kinds of contracts that are executed, the assurance that you are seeking is already a part of the standard operating procedure.

Mr. KENNEDY. I might comment, Mr. Chairman, that we spent a lot of time on this particular section with the very concern that you have expressed. We came to the conclusion within the Department that there was no practical way that the Bureau could do what you are concerned about.

I, certainly, raised the same issue and discussed it at great length. We certainly don't say that your concern is not well-founded, but we just came to the conclusion there was no practical way that that could happen. We have other legal defenses that we would not let the Bureau off the hook. As you are aware, the State of California's position, through the Attorney General's Office, is that the Bureau is already obligated to this delta protection.

Mr. MILLER. I understand that, and I assume that one of the hats you are wearing sitting at that table as an adversary in that relationship, that in this instance you are getting willing compliance with what is already the law.

Mr. KENNEDY. That's correct.

Mr. MILLER. That is, that this facility be used in this manner to provide these protections. I am just trying to make sure that as we cement that relationship that we in fact have an agreement that is real in terms of its operation, because there would be a great deal of disappointment, I might say, if that was not the case.

Mr. Pashayan.

Mr. PASHAYAN. The chairman is raising a very interesting question that I am sure not intentionally but inadvertently reflects some of the concerns I was expressing in Anaheim, at least, that is the way I see it.

Let me try possibly to ask the same question, George, you might have been asking in a different term. Does section 10(h) relate to the Mid-Valley Canal at all? Is there any relationship between that and the development of the Mid-Valley Canal?

Mr. HOUSTON. It is not a direct link, nonetheless, the capacity provided there could be used to move water down into the Mid-Valley service area.

Mr. PASHAYAN. So, you are saying that the agreement that would have to be achieved under section 10 could still be achieved—the Coordinated Operations Agreement would then go fully into effect—but the Mid-Valley Canal would still be unresolved. That is a possibility, is it?

Mr. HOUSTON. Until such time as the Mid-Valley Canal is authorized for construction, I think that issue remains unresolved.

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Nonetheless, the capacity available in the State aqueduct could be used to supply water where it could be——

Mr. PASHAYAN. In other words, once that agreement under section 10(h) is achieved, then there is an assured supply for the Mid-Valley Canal. That is what you are saying, is it not?

Mr. HOUSTON. That agreement, in and of itself, would not make the supply available. It would make the capacity to move the water available.

Mr. PASHAYAN. But it would not guarantee the supply?

Mr. HOUSTON. No, until such a contract is executed for the water supply itself, that's where that assurance would be.

Mr. PASHAYAN. What I am saying is, then section 10(h) does not contemplate the authorization or some other action close to authorization for the Mid-Valley Canal, then, does it?

Mr. HOUSTON. That's a difficult one to respond to, but let me try. It does not preclude Mid-Valley Canal.

Mr. PASHAYAN. But it does not guarantee it?

Mr. HOUSTON. It does not guarantee Mid-Valley Canal, but would accommodate Mid-Valley Canal

Mr. PASHAYAN. Yes, if the agreement for Mid-Valley Canal could be reached afterward.

Mr. HOUSTON. That is correct.

Mr. PASHAYAN. Yes. It would not preclude it, but the whole Coordinated Operations Agreement, once this section 10 contract is achieved, or the understanding is achieved, could be achieved without anything for Mid-Valley Canal. That is a possibility?

Mr. HOUSTON. That is a possibility.

Mr. PASHAYAN. Thank you for yielding, Mr. Chairman. I will ask questions later on my own time.

Mr. MILLER. Mr. Lehman.

Mr. LEHMAN. I think the chairman has touched on a real sensitive point here with respect to the whole Coordinated Operations Agreement and the necessity to come up with this wheeling arrangement.

I think what he is saying is people in the delta may feel that they don't have a Coordinated Operations Agreement until you have signed off on the wheeling proposal. Once they get this interim Coordinated Operations Agreement, which I think is what we are talking about today, there may not be sufficient incentive for you to go on through on a timely basis.

Why is that clause requiring the COA to terminate unless there is a wheeling agreement in the proposal? Why is it necessary?

Mr. HOUSTON. There are a lot of interests who have been involved in the open negotiations that we have had out there. Many of the interests are served differently from the different projects. Their interests, obviously, are competing. To be able to fully utilize the projects as we have anticipated requires that we integrate the capacities that we have available to operate in everyone's benefit. To be able to reach agreement on that wheeling provision, for example, is the only way for us to fully utilize the water supply that we have developed—to really operate as we have contemplated.

Mr. LEHMAN. But you put a hammer clause in the bill.

Mr. HOUSTON. It doesn't require termination, Mr. Congressman, it provides that if impasse is reached it could be terminated.

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Mr. PASHAYAN. Have we not had enough of hammer clauses in the last couple of years?

Mr. HOUSTON. It provides that it "may be terminated" as opposed to "must be terminated." As I say, our expectations would be that we would be fully successful in reaching agreement on that contract.

Mr. MILLER. On that point, if I might, if the gentleman will yield on that point.

Mr. LEHMAN. Certainly.

Mr. MILLER. It appears that this ability to unilaterally terminate the agreement goes to any changes in the agreement—in this COA. If one party or the other seeks an amendment to this COA, and you can't reach agreement, you could end up unilaterally terminating it? Not just the wheeling agreement? Am I reading that right?

Mr. HOUSTON. As new facilities are added, as circumstances change, operating strategies will need to be modified. As an example, if a new facility is constructed, the agreement is going to need to reflect those. If water quality standards change in the future, different modifications will have to be put in. In the absence of being able to reach agreement, the net effect would be to go back to the 1960 Coordinated Operations Agreement. So you would always have a degree of coordination within the projects. We expect this one would enable modification as we proceed.

Mr. KENNEDY The agreement, Mr. Chairman, does provide a termination provision for either party that there is a process of 24 months in which the parties have to attempt to negotiate things. If at the end of all of that, it has not worked out, then the party can terminate it.

Now, again, I just want to emphasize it from our standpoint, what this means is the coordinated operations part of the agreement might fall apart and have to be reworked. We do not look upon this as any opportunity for the Bureau to get out of their delta protection obligations.

Mr. MILLER. Go ahead.

Mr. LEHMAN. I want to followup, then, on Mr. Pashayan's comments tying this in with Mid-Valley.

Mr. Kennedy, you have proposed that, I think at the last hearing, the possibility that Mid-Valley could obtain water through existing facilities. I think you mentioned a figure of 200,000 acre-feet. OK, that requires a wheeling arrangement; is that not correct?

Mr. KENNEDY. That is our understanding, is that the Bureau really has no capacity south of the delta to wheel water from Mid-Valley Canal except through their DMC. They will need our aqueduct, at least as far as the O'Neill Forebay.

Mr. LEHMAN. OK. The wheeling agreement that is envisioned in this proposal is a comprehensive one that would cover everything; correct? In other words, if you set up a wheeling arrangement for Mid-Valley only, that does not meet the criteria in the overall COA? You need an overall statewide agreement to meet that; is that correct?

Mr. HOUSTON. The expectation would be that we would have an agreement for access and basically wheeling the conveyance capacity, if you will, subcontract relationships with individual districts, whether it is Mid-Valley Water Authority, whether it is individual

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districts, could be done under the master agreement with the State. We would look at a master contract relationship with the common terms and conditions, subcontract relationships with those who benefit or receive water under the agreement.

Mr. KENNEDY. It has been our hope that we would work out a master agreement or a generic agreement so that we didn't have to deal with the Bureau's individual contractors.

Mr. LEHMAN. I think my concern is, I have viewed the Coordinated Operations Agreement as the first step to solving many of the water problems in California, including development of additional facilities, both storage and delivery. What I am a little bit concerned about here is that it is not quite that because I think before we can get on with building those facilities we will need to solve this wheeling question because we won't really have any permanence to the COA.

Comment on that?

Mr. HOUSTON. I guess from our perspective we look at the Coordinated Operations Agreement essentially as firm commitments, firm operating relationships between the two projects. Operating competitively as opposed to cooperatively reduces the water supply to both projects. It is in both projects' interests to maintain and sustain the coordinating components within the COA. It is also in both projects' interest to consummate an agreement for wheeling.

I guess I would say from an operations perspective, we see the Coordinated Operations Agreement as firm. Only if you come to such an impasse where you can't make the system operate for either party, would you even have the ability to terminate. Then, it is not a requirement, but it may terminate.

Our expectations would be that recognizing that it is in everyone's interest to have that, that we would be very successful being able to implement it.

Mr. KENNEDY. I think that that is an important point, that it is in both projects' interest to work out this agreement. Neither project has an interest in stonewalling it on working out this agreement.

Mr. LEHMAN. OK. And this agreement is in overall framework and within that you make incremental decisions about——

Mr. KENNEDY. I think that is a good way to characterize the COA. As I mentioned earlier, we do not have Suisun Marsh protection in here, but we know that we will be back here, we hope, very shortly with a proposal on Suisun Marsh. The south delta facilities are not included in here, and the south delta people are, of course, asking that they be included.

Well, we are in the midst of negotiations with them, and they will be amended into this at an appropriate time.

Mr. PASHAYAN. Will the gentleman yield?

Mr. LEHMAN. Certainly.

Mr. PASHAYAN. I think comfort has to occur on both sides here. And I fully appreciate that the delta looks forward to an assurance of clarity of water, and that is all well and good. I do not think that anybody is opposed to that.

I was not aware that this was a part of the COA when I made some remarks in Anaheim. I should hope that we can see this not as a blockade to the ultimate achievement of the COA, which I

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think benefits everybody, but to see this rather as an opportunity, a period of 5 years in the meantime, for some of us to work out and to get into concrete manner the undertaking of some other projects such as the Mid-Valley Canal.

We have got 5 years here to begin to realize the Mid-Valley Canal. I think that could be a healthy climate, this 5-year period that we are talking about if we get cooperation from our friends in the delta region in this interim time.

If we can achieve something like the Mid-Valley Canal, get the authorization for it within 5 years, then I think the wheeling agreement and other projects, as well—I am using Mid-Valley as but one example of the series of projects I think most people would agree are immediately needed. Then it seems to me that it is going to be even easier for the parties to sit down and to achieve this wheeling agreement which, in turn, will bring the COA into final form.

So, as I sit here now, I like this provision because it, as I say, gives us a 5-year period to work out some of the things that we in the Central Valley need and that I should hope that we have the full cooperation of our friends in the delta.

Would either of you care to comment on that?

Mr. KENNEDY. Well, I think, Mr. Pashayan, one of the issues that we have struggled with for so many years in California water development is: How do you keep everybody working together? How do you keep one party from getting what it needs and then walking away from the process? We struggled with this provision. It gave us problems, having the Bureau theoretically have the ability to walk away from it.

But then when you look at all of these issues that still have to be dealt with, then I think we fell back and looked at this as a framework agreement that keeps everybody in the process and everybody can continue to try and go forward together.

Mr. PASHAYAN. Dave, would you care to——

Mr. HOUSTON. I would share those statements. The Coordinated Operations Agreement has a lot of different components in it. We try to coordinate the operations of all of the projects that we have out there.

It is in all of our interests to try and reach accord, try to keep everyone involved as we incrementally move forward. The agreement that we have right now does provide that framework for reaching accord. It does provide the plateau of protection at the delta, in the delta. It provides for modifications in the future consistent with the terms of the agreement.

It is in our interest to operate cooperatively as opposed to competitively. I think that both of us are forced to the table in a cooperative spirit because of that, because to do otherwise ends up hurting both projects in a substantial way.

So we look at it as really an opportunity. We don't see it as something which is there to say that we could go ahead and get an upper hand on either side. Obviously it is a competitive relationship between the State project and the Federal project.

We think we are there at the tables both with the levels of protection that keep us negotiating toward the agreements.

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Mr. PASHAYAN. I see this section 10(h) as a point half-way between what I think—I speak for myself—I thought the COA was all about when we were at Anaheim, which was an agreement without any sort of contingency like this, as small as the contingency might be, it is a contingency—there is no doubt about it—between an absolute agreement which—at least I was operating under that assumption—and what I was saying at Anaheim simply was I am not against the agreement, but let us do the agreement and let us authorize some of these other projects at the same time so that people in the Central Valley can share in the feeling of comfort and assurance that they are going to get the projects that they need and at the same time the delta gets the protection that it needs and move on a broad and comprehensive front simultaneously.

I see section 10(h) as putting us in the middle. We have got a good step toward the Coordinating Operations Agreement, and yet we have 5 years to try to work out some of these other things. I think that that is a positive development for the entire State. That is the way that I am looking at it at this moment. I may have been using your time.

Mr. LEHMAN. I am sure you will be glad to reciprocate.

Mr. PASHAYAN. I shall be.

Mr. MILLER. Mr. Coelho.

Mr. COELHO. Thank you, Mr. Chairman.

I hate to bring this up again, but as one who has been here for 20 years now as a staffer and a member, I have seen the whole cooperation between the State and the Federal Government, and between the valley and the delta deteriorate, rapidly over those years to a point that the delta couldn't do anything and we in the valley couldn't do anything.

And what we need more than anything else is to start working together again. I think that the two of you have started to do that.

Now, we can each sit up here from the delta, from the valley, and start to pick at the agreement and say this doesn't take care totally of my interests, it doesn't take care totally of your interests, but as I have said repeatedly over and over again, I want a COA, I want quality water in the delta. My farmers want to have quality water in order to grow their crops.

They can't have water that doesn't have certain quality standards. We need it as much as anybody else. And it is silly to sit back and fight about something that we both need.

What we need to be doing is trying to encourage it. This subcommittee has the legal authority to do oversight. It seems to me instead of us quibbling, what we should be doing is encouraging, and what we should be doing is holding the hammer over your head that if you don't do what you say you are going to do, we are going to get back into it.

But we want you to get together, get united, let's get on with the business that both of you are supposed to be doing. It seems to me that George and the delta folks have an interest to get this going. It may not be perfect from their point of view, but have an interest to get this going so that we can start doing those things that they feel need to be done in the delta, protection of it, which I totally agree with.

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Those of us in the valley may not totally agree, and we don't, with the agreement. But I am more interested in moving on. I am tired of fighting and sitting back and not doing anything.

Let's move on, and let's get on with these other things. I think this is the timeframe to look at it and review it, I think it is healthy, as far as I am concerned this gives us on this subcommittee an opportunity to make you guys and gals out there to do what has to be done.

I want to compliment you, and I think that you are making progress. I have said repeatedly to the chairman that as far as I am concerned I intend to cooperate. But I hope that everybody on this subcommittee, while I don't want to dissuade people from questioning and so forth, I think that our attitude should be one of encouraging, and I think the chairman, hopefully as chairman—I know he intends to be a strong chairman—that he keeps the gavel over your head and says that he is going to monitor and pay close attention to what you do and do not do over the next few months and make this happen.

We desperately need this in California. We have got to have the COA. It has got to move on. We have got to get to other projects that are needed.

You know, California is getting further and further and further behind because we are quarrelling in our own backyard. We are not quarrelling with other States. We are quarrelling in our own backyard.

We are behind. And people I don't think understand the negatives that are out there if we don't get together and if we don't start moving. So I applaud you for what you are doing. I think it is great.

I hope that this subcommittee will move on with this authorization that is needed, that we don't try to amend it or attach things to it, but you damn well better be sure that we are going to monitor it and that we are going to watch it, and we are going to make sure that you are doing what you commit that you are going to do.

I know that George will make sure that you do, but I will support him in that effort. But I want to move on. So I applaud you for it.

Mr. PASHAYAN. Will the gentleman yield?

Mr. COELHO. Be glad to.

Mr. PASHAYAN. I appreciate the remarks of my colleague. A lot can be done in 5 years, as I said myself, if everybody puts his shoulder to the wheel. I prefer the analogy of a wheel to the analogy of a hammer. As I said, I have had enough hammers in the last couple of years.

Wait until it drops is what George says.

But I would also remind that while the subcommittee has legal authority in terms of oversight to look at what the parties are doing, one of the things the parties can do under this agreement is to walk away from it in 5 years.

And though we have the oversight to watch that happen, and though I really dearly hope that positive events will develop between now and 5 years from now, so that that will not happen, that is still one of the things which the parties are able to do, and our oversight cannot stop that as such.

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But, as I say, I hope there is a positive spirit all up and down the State of California in the meantime to start to look at some of the things what we in the Central Valley need, and if we put our minds and efforts to it we can achieve a lot in bringing those about within the next 5 years.

So that is why I particularly like this provision as I sit here now.

Mr. COELHO. I think the only thing is, to my colleague from California, is that it is a lot easier to be negative than it is to be positive. It is a lot easier to question than it is to be—it is a lot harder to be positive. It is a lot harder to say we have got to do it and let's get on and let's do it, as we found out.

It is easy to find something wrong and to be negative and say this may not happen. I just am encouraging all of us to look at—we have a problem out there. It is in the delta, and it is in the valley, both of us.

I mean, nobody on this subcommittee from California can afford to sit back and say let's pick it apart. I don't care where you are from.

All I am saying is let's get united, let's try to encourage these people to do what needs to be done. I am willing to give up a part from my area to get something done because in order to create the right atmosphere out there to do what I know the gentleman from California wants to do we have got to start trusting people, and that is what I am willing to do, and that is what I want to do.

Mr. PASHAYAN. I agree, but all I am saying is that this is—we have got a 5-year time here. And I think trust has to occur on both sides.

Mr. COELHO. I think the gentleman has stressed the hammer over and over again, and if he stresses it too much, the hammer will become too big.

Mr. PASHAYAN. No. I was stressing a wheel, not a hammer. I told you, I am tired of hammers.

Mr. MILLER. Well, it is very apparent to everyone in the room a great deal is riding on this agreement so let us look at the agreement a little bit more.

Article 2 of this states that it will require the CVP and the SWP to be operated to meet the current 1485 water standards. If those standards are changed, on page 21 it indicates that you could have this agreement, but should the United States determine that the new delta standards are inconsistent with congressional directives, then the United States might promptly request the Department of Justice to bring a suit or reserves the right at anytime for the enactment of legislation.

Two questions. If D-1485 is modified at some point in the future, which it may very well be—up or down, I don't have any idea which way it would go—what standard would be in effect until the new standard is final under this agreement?

Dave Kennedy, under State law you would assume that 1485 would remain in place until the new standard is promulgated?

Mr. KENNEDY. No. We would assume that the new standard would be in effect and it would take some court action——

Mr. MILLER. The challenge is to the new standard.

Mr. KENNEDY. Yes.

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Mr. MILLER. But the burden of proof would be on overturning the new standard.

Mr. KENNEDY. That would be the position.

Mr. MILLER. What would be the impact of this agreement in that case?

Mr. KENNEDY. This agreement, in our view, would provide for exactly what you said, is that it would take a court action, a TRO, or something, to keep the new standard from applying to the Bureau.

Mr. MILLER. So if the new standard was lowered, and less water was required for delta protections, I would assume that the United States would have no problem with that, because they are already meeting the higher standard, and they more or less have agreed to do that.

Mr. HOUSTON. It would depend on the way the standards were set.

Mr. MILLER. Sure. Now, if the standard was raised, and additional water was required—if you determine that additional water was necessary, it says here that the Federal Government will go along with that so long as it is not inconsistent with congressional directives.

What are the congressional directives that it might be inconsistent with in current law, not something we will do in the future?

Mr. HOUSTON. Let me give a hypothetical example. We have a repayment obligation for the Central Valley project. Let's assume that a flow standard was set so that the entire Central Valley project had to be operated to provide for flow releases. Hence, we have no ability to repay the project.

That is an example clearly inconsistent with the congressional directive when we have no ability to repay. It is a question of judgment; can you modify the standard and still be able to meet your repayment obligations?

They are laid out. And there are many in the various authorizing acts of the Congress that you previously provided for each unit. It is a question of: Can you, in fact, operate the project to achieve those standards and still be able to meet your other obligations that have been presented to the Secretary?

Mr. MILLER. If we are to reauthorize the CVP for the purposes of making delta and in-basin protection one of the stated purposes of the project, does that remove one of the potential objections that might be raised?

Mr. HOUSTON. That raises a number of interesting questions, Mr. Chairman, if I understand the question. To reauthorize the project for water quality purposes, one must ask themselves the questions, how much of the project would you allocate to that purpose, would it be a reimbursable, or a nonreimbursable cost, how would you treat that in terms of the overall project performance; and how would it relate to any of the existing contracts?

I think it raises an awful lot of questions.

Mr. MILLER. What is your position with respect to that?

Mr. HOUSTON. I think where we are with respect to the Coordinated Operations Agreement—and this is one of the provisions that we debated long and hard. We had well over 100 versions of article 11. I mean, that has kind of been the framework that we have all debated.

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We had the opportunity to try and stipulate to what standards would be achieved during the conduct of litigation. We had opportunities or different designs to bring back to the Congress the standards that say "Congress, can we meet these standards and how do we treat the costs?"

We finally came down that the more workable one was to try and put it in to see if we could achieve them. If we could achieve them we have the ability to modify. If we couldn't achieve them and meet our obligations, the State has reserved all of their legal arguments to take us to court to force them. We have preserved our defenses to try and protect what the Congress has authorized.

I guess from the standpoint of just the practical sense—and this is on the basis of what we have looked at with the water sources control board, they take long evidentiary hearings to evaluate water quality standards.

I guess it is our judgment that we are really fine-tuning the standards. We are not going through wholesale revisions.

The kinds of changes that we are talking about or what we would anticipate of what we know today are relatively minor fine-tuning kinds of things, I guess is what I would say.

Mr. MILLER. But, obviously, whether or not water quality is the stated purpose of the CVP is crucial, again from my point of view, as to the Department's willingness, this administration, the next administration, what have you, on entering into these agreements. It goes to those defenses.

Again, today the Department sits here in willing compliance, but that was not the situation in the not-too-distant past. One of the concerns with respect to the water quality requirement is whether that should be reduced to legislation.

Mr. HOUSTON. Our concept——

Mr. MILLER. I can understand the repayment problem. If you evaporate the ability of the project to repay, I understand that one. That one doesn't trouble me.

Mr. HOUSTON. Well, the other questions that we end up having are if you authorize it for water quality purposes, is that the most significant project purpose? Is that first in line? How does it relate with the other——

Mr. MILLER. What would the position of the Department be?

Mr. HOUSTON. What we have tried to do is find a workable relationship where we can achieve the standards. As standards change——

Mr. MILLER. Well, we could be No. 1 or we could be No. 5.

Mr. HOUSTON. What we have established right now is we are meeting the water quality standards. If we can meet the standards——

Mr. MILLER. I understand what the COA does. I am worried about what the law does in terms of providing this as a purpose. What is first now? In-basin river regulation, flood regulations?

Mr. HOUSTON. And flood control.

Mr. MILLER. Then what is second?

Mr. HOUSTON. The water supply values of the project. Third is energy.

Mr. MILLER. So where would water quality fit?

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Mr. HOUSTON. On some of the circumstances water quality is a question of mitigation. You have to be able to provide mitigation. It is a reimbursable project cost. We treat it as a reimbursable cost in the projects.

If it is authorized as an enhancement unit, it has typically been on a cost-sharing relationship, most of the cost being nonreimbursable. The overall authorization of the CVP has a very, very long history. Individual units have separate authorizations.

That is why it is difficult for me to just give you a very quick response. I think it depends on what the standard is, what the operation regime or regimen would have to be implemented to meet those standards, and to just say across-the-board this is how we would respond, I don't think we can do it.

I think what we will try and do is operate the projects to achieve them unless it is inconsistent with the obligations we have under the authorizations.

Mr. MILLER. Mr. Pashayan.

Mr. PASHAYAN. I have a question because I see a rather large ambiguity in how subsection (b) has been drafted. As is often the case in contracts, commas or implied commas can become very powerful little animals and dominate the words around them.

Now, if you take the word "then," therein lies ambiguity. I will frame my question.

If you put the comma in front of "then," the "then" just becomes a conjunctive. It becomes almost like a "therefore." And the implication is that you are saying the United States should determine that the new delta standards are inconsistent with—and you have to read it "present congressional directives," comma, "then the United States shall promptly request."

Now, if you put the comma after "then," you read it with the prior clause so that you are talking about "are inconsistent with congressional directives then." That is, future congressional directives.

And I should like to ask you, therefore, whether (b) is meant to compare present congressional directives with new delta standards or whether it is meant to compare future congressional directives with future delta standards.

Mr. HOUSTON. It would mean whatever the congressional directives were which were applicable. That is, if a future congressional directive superseded or overturned, it would be then applicable congressional directives.

Mr. PASHAYAN. So you are talking about future congressional directives?

Mr. HOUSTON. As well as historic.

Mr. PASHAYAN. As well as present.

So, therefore, to clarify that ambiguity, the comma should go after "then," which then refers that entire clause to future congressional directives. In other words, should the United States determine that the new delta standards are inconsistent with congressional directives then—meaning some time in the future—that is how you intend it, then, is that right? It cannot be both.

Mr. HOUSTON. We could probably achieve it as easy by striking the word "then" if we determine them to be consistent—the point is we are talking about——

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Mr. PASHAYAN. Well, I just wondered which was intended, whether you were intending to compare the—whether you were intending to freeze congressional directives today and compare them to future new delta standards, or whether you would compare future to future. That is all.

Mr. HOUSTON. We were not. Even if we were intending to do so, I don't think we have the ability to because Congress could always act to overturn what they previously decided.

Mr. MILLER. Mr. Lehman.

Mr. LEHMAN. On my own time.

Mr. COELHO. Can I just ask a question?

Is the gentleman from California an attorney?

Mr. MILLER. He just proved it.

Mr. PASHAYAN. I do not see the relevance to whether I am an attorney or not.

Mr. COELHO. I do not know either. That is what I was trying to figure out.

Mr. PASHAYAN. Well, actually, I happen to be, both now and then.

Mr. MILLER. He was then, not now. No.

Mr. Lehman.

Mr. LEHMAN. Thank you. I want to say I have the distinction, I guess, of looking at this from a unique perspective. I, as you know, represent both the delta and the San Joaquin Valley. I represent the Central Valley and the delta, so I have had to deal with both parts of this equation and both parts of the discussion, and I just want to say I think from my perspective you have done a remarkable job of balancing the interests and coming up with something that is as acceptable to me in Stockton as it is in Fresno. And I think that I can speak with——

Mr. MILLER. Stockton, Fresno. What is the difference?

Mr. PASHAYAN. How about in between? Is it acceptable to you in between or you are not sure yet?

Mr. LEHMAN. I don't represent anything in between. I want to compliment both of you, as Mr. Coelho did, for the tremendous work you have done. I think that it is remarkable. This is the first time in my lifetime that we have had this kind of cooperation and agreement between the State and Federal Government.

I remember when I was in the State legislature we never thought it was possible for us to agree in California, much less get an agreement between the two major water purveyors. So I think this is a great step.

I look forward to supporting the agreement. I can certainly support it as it is written. I hope it is not modified in any significant way that would cause any of us any problems.

I do want to followup on one thing you mentioned, and that is that this is not in any sense the final agreement, even as far as the COA is concerned. You still plan on incorporating further agreements with the south delta and with Suisun Bay into this; is that not correct?

Mr. KENNEDY. That is correct.

Mr. LEHMAN. Are those discussions going on now?

Mr. HOUSTON. Yes, they are. It provides a flexibility for modifications in the future, so it will be a continuing document. As new ad-

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ditions are added, we would have to modify certain provisions to continue the concept of full coordinated operations of the projects. So those are anticipated to be added at a future date.

Mr. LEHMAN. So, for instance, the south delta which I am very much concerned about, is—you are now in discussions about reaching an agreement for mitigating the problems in that area?

Mr. KENNEDY. We have negotiations going on with the South Delta Water Agency now, yes.

Mr. LEHMAN. And when those are finished and you reach agreement, will that be incorporated legislatively or just administratively?

Mr. KENNEDY. I think it will probably take some legislation because I think we are going to be asking for appropriations for the Federal share of the physical solution.

Mr. LEHMAN. And the same would go for Suisun?

Mr. KENNEDY. Yes.

Mr. LEHMAN. Is there a price tag on this COA now as written?

Mr. KENNEDY. No.

Mr. LEHMAN. There is no expenditure required beyond what you already have?

Mr. HOUSTON. To implement the COA requires no new expenditure of funds. There will be future additions contemplated.

Mr. MILLER. Will the gentleman yield on that point?

Mr. LEHMAN. I yield to the chairman.

Mr. MILLER. Let me ask you this. On the question of how you allocate the cost of wheeling Federal water, I assume you are going to charge for the use of the State's facilities to pump and to move the water. How would that be passed back to the Federal Government and to the contractors? Are you going to amend contracts if you engage in wheeling water to current contractors? Will it be part of the contract price?

Mr. KENNEDY. We will charge them as though they were any other person that we wheel water for, which we do today. And how they charge it, or whether we deal with their individual districts, hasn't yet been resolved. We do today deal with some of the individual Federal districts and we have felt there might be an advantage in us not getting into that arrangement, but instead dealing only with the Bureau.

Mr. MILLER. Let me just raise an issue, that is obviously somewhat outside my geographical area. If the Federal Government is currently delivering water today to a Federal contractor, and it is determined that you can get water to that person more efficiently by wheeling the water through a State system—I don't know if this example exists or is applicable—what will happen with respect to the contract price for that water?

If the wheeling makes the water more expensive, can the contractor sit on his current rights and say, "look I am paying $8, I am not going to pay more than $8." How do we get around that problem? Who pays?

Mr. HOUSTON. First issue. You cannot wheel water through the State aqueduct in a less expensive way, No. 1, it is more expensive. This newer facility has higher costs.

No. 2, to the extent any district gets additional water—receives the additional benefit that requires modification and amendment of

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the contract—that is the new and supplemental benefits rule under the reform act of 1982. So those contracts would have to be modified to accommodate them.

Mr. MILLER. So the contract would be required to be modified because you would assume that the General Treasury is not going to eat that additional cost. It is going to be parceled out to the contractor.

Mr. HOUSTON. That is correct.

Mr. KENNEDY. One thing we have found in working out these arrangements to date is that you tend to have a number of agencies involved where there is a sharing of benefits so they together work out the sharing of costs in some equitable way.

Mr. LEHMAN. OK. One other question. Am I correct in assuming that those Federal projects completed prior to the State water project—I am talking specifically of Friant Dam—are excluded from this agreement? In other words, you are not required to modify any of the releases from those facilities to meet these new obligations you have taken on in the delta?

Mr. HOUSTON. OK. That is an excellent point. And one of the things I might mention is the sharing formulas that are in the Coordinated Operations Agreement really deal with facilities north of the delta. So when you see that sharing formula, that does not reflect either the New Melones or Friant Dam.

So, no, they are not directed by the COA.

Mr. MILLER. With respect to, again, the cost, do we assume that—what is your assumption with respect to the water that is going to be used to meet water quality standards under the COA and under State law? Is that nonreimbursable? Is that a determination that we are going to have to make?

Mr. KENNEDY. You mean with respect to the State water?

Mr. MILLER. No. With respect to Federal water.

Mr. HOUSTON. The way the agreement works out to us right now, Mr. Chairman, we look at how we would have operated to meet Tracy standards with the 1960 accord. We would have had 8.3 million acre-feet of marketable yield.

Under the new Coordinated Operations Agreement as it is laid out right now, "first in time, first in right," we remain with 8.3 million acre-feet of marketable yield. On that basis, we would not recommend a cost reallocation at this point on the basis of the Coordinated Operations Agreement.

So we are looking at continuing with the cost allocation of the project as it is. Any reallocation of cost for the Central Valley project would have to be approved by the Congress, or when we reallocate cost, to have congressional approval. We are looking at keeping it intact under the COA.

Mr. MILLER. Mr. Lehman.

Mr. LEHMAN. If I might move to one other area quickly. What is the legal status of 1485 right now?

Mr. KENNEDY. It is before the State court of appeals in San Francisco.

Mr. LEHMAN. OK. But it is in effect right now?

Mr. KENNEDY. That is what we are operating under but it is being challenged by virtually everybody that was involved one way or the other.

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Mr. LEHMAN. How do those challenges and those legal entanglements and the possible solutions thereof interact with this agreement?

Mr. KENNEDY. Well, we have, in effect, taken the numbers out of D–1485 and put them in this agreement.

Mr. LEHMAN. So we have the numbers in here, not the——

Mr. KENNEDY. That is correct.

Mr. MILLER. I think there are additional questions. If I can ask you to wait, we will go vote and be back in 5 or 10 minutes.

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Mr. MILLER. If you don't mind, we will wait 1 minute. Congressman Pashayan said he had a question. If he doesn't come, we will let him submit it in writing.

Let me ask you, if I might, whether or not as a result of this agreement there are any explicit or implicit understandings or commitments to construct additional storage facilities in either project.

Mr. KENNEDY. I would say no.

Mr. HOUSTON. I think there are no commitments to any new construction.

Mr. MILLER. With respect to, exhibit B, there are increases shown for storage on the American River and on the Sacramento River, based upon what assumptions? Are you assuming additional water storage will be completed there?

Mr. HOUSTON. Where were you referring again, Mr. Chairman?

Mr. BEARD. B–1 and B–2.

Mr. HOUSTON. I guess I am unfamiliar with the new storage you are referring to. Perhaps you could reference it for me.

Mr. BEARD. Under the Sacramento Basin use in B–1, it assumes the American River Basin will contribute 200,000 acre-feet.

Mr. HOUSTON. Oh, you are talking about the use as opposed to the storage. That is how much water will actually be put to use in those areas.

Mr. BEARD. OK. This indicates storage or use?

Mr. HOUSTON. That is use. Sacramento Basin use is the heading there.

Mr. BEARD. OK. Then there is an increase in use of 900,000 acre-feet based on what assumption?

Mr. HOUSTON. Those will be in the exhibits. I prefer to give a detailed explanation of the increases and the methodology for the record, if we might.

Mr. BEARD. But they do not assume the construction of any new facilities?

Mr. HOUSTON. The agreement does not provide for construction of new facilities, nor are those assumptions made.

Mr. BEARD. Either implicitly or explicitly.

Mr. HOUSTON. That is correct.

Mr. MILLER. OK. So you will provide us for the record on those exhibits, but now there is no assumption as to the construction of new facilities in the agreement?

Mr. HOUSTON. That is correct.

Mr. MILLER. Mr. Pashayan had a question that he wanted to ask.

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Mr. PASHAYAN. Yes. And this is a question, an extension of the questions I asked about what I found as an ambiguity in subsection (b). When we take a look at subsection (c), combined, as I read your interpretation of subsection (b), or I should say your intention of subsection (b), that is to say that future congressional directives would be compared to future delta standards, it would therefore be at least theoretically possible—and I am wondering whether this is your intention—that the Congress pass future directives that would be inconsistent with a future delta standard and, thereby, take action under subsection (c), is that your intention?

Mr. KENNEDY. I might comment from our standpoint, it certainly isn't our intention—this whole provision of what happens if we get into a situation where State standards are inconsistent with congressional directives comes out of the lengthy litigation between the State and the United States over the issue of the jurisdiction of the State board over the Federal project, and this concept that there might at sometime be congressional directives which would override State standards comes right out of the Supreme Court decision and the ninth circuit opinion on this.

So we have tried to track this, being completely neutral on that issue, recognizing with a Federal project the Congress can always do something that would override what the State board would be trying to do, but it is in—we view this as quite a theoretical, necessary thing that just has to be there to protect the Federal interest.

Mr. PASHAYAN. Well, now do you contemplate that under subsection (c)—let us suppose a future new delta standard and a future congressional standard that is inconsistent with that, could the United States under subsection (c) take action in court to walk away from the agreement?

Mr. KENNEDY. To walk away from the agreement itself?

Mr. PASHAYAN. Yes. To cancel the agreement. Could they ask the court to cancel the agreement in the future?

Mr. HOUSTON. The action, it seems to me, that would be initiated in the circumstance that you describe that you have standards that are inconsistent, we would have the obligation to go to court to determine the applicability of those standards to the Central Valley project.

If the court found the standards were inapplicable, the project could not then be operated to meet those standards. Subsection (c) says we reserve the right at any time to seek legislation, including legislation to authorize us to achieve those future water quality standards if that were found.

So it wouldn't be an issue of walking away from an agreement, rather, determining the applicability of the standards as to the Central Valley project.

Mr. PASHAYAN. But, in fact, I could understand where in the future it would contemplate what you just described, but is there not another possible course of action? That is to say, if the Congress refused to pass something not inconsistent, that is to say, if Congress in the future left a directive that was inconsistent, is it not possible then for the United States to move that since its policy so clashes with the State's policy, that operation becomes impossible and move for the court, in effect, to cancel the agreement? I should think that that would be possible.

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Mr. HOUSTON. I guess I would agree with you that that would be possible that you could go for termination of the agreement on that basis.

Mr. KENNEDY. But at that point, Mr. Chairman, I might say, we are already in accord at that point.

Mr. PASHAYAN. The court cannot compel Congress to pass a law consistent with the new delta standard. I just see this as a possible out on the part of the Federal Government. I just thought that possible interpretation ought to be made aware of. That is all.

Mr. MILLER. It allows the Federal Government to raise defenses for the operation of its project in light of the subsequent change in the standards which may or may not be inconsistent with congressional directives at that time.

Mr. PASHAYAN. I think you are saying the same thing in different words.

Mr. MILLER. It simply preserves the defenses. You may exercise those defenses and still find out you have to comply with State law in terms of the operation of the Federal project, but you get to exercise your defenses.

Mr. PASHAYAN. Not to get into a long and arcane legal argument on this point, I do not know whether I agree with you on that because I think it is—if the Congress under the *New Melones* case has expressed an interest, and that interest is inconsistent with the State's interest, so that the thing cannot be operated one way, and then I think that that is when contracts become impossible sometimes.

I think that is—it might be a remote, but a distinct possibility.

Mr. MILLER. Mr. Lehman.

Mr. LEHMAN. Mr. Houston. Do you anticipate signing any contracts for additional water delivery prior to completion of this wheeling agreement?

Mr. HOUSTON. Where we are right now is we are putting together the final environmental document, first of all, on the Coordinated Operations Agreement itself. We are also initiating environmental impact statement processes in the other areas. The Sacramento Basin, as an example, we are beginning to prepare now.

We may be in a position—I guess I would say depending on the timing, we might, in fact, be in a position to execute contracts in the Sacramento Valley. However, I wouldn't see the ability to do so in the San Joaquin Valley until we have the wheeling agreement done.

On the timeframe that we are on, if we are successful and could get the wheeling master contract done——

Mr. LEHMAN. My point is to relay some of the chairman's apprehensions about this, that you really need the wheeling agreement to affectuate any new contracts; don't you?

Mr. HOUSTON. We do in the San Joaquin Valley. For Sacramento Valley, that is not necessarily the case because we do have the ability to take water directly out of the river, say, for individual pumpers.

On the Tehama-Colusa Canal we have capacity left where we could still deliver additional water. In the San Joaquin Valley, on the other hand, it would take an agreement with the State to be able to do the marketing program.

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Mr. LEHMAN. So we really couldn't have a contract for additional water without a means of getting it there, and the only means we could get it there would be for you to come up with some type of wheeling agreement with the State.

Mr. HOUSTON. You might just keep in mind, in-basin needs also have to be achieved before either project can export. So from that standpoint if you define in-basin needs as water quality standards, before we could actually export, we would still have to meet those in-basin needs.

Mr. LEHMAN. OK. And the water you just referred to that you could contract for in the Sacramento Valley, is that the same water you talked about earlier, the 500,000 acre-feet?

Mr. HOUSTON. That would be a part of that 500,000 acre-feet. The 500,000 acre-feet is reflected more as a request. You might describe it for some as an insurance policy that they may some time in the future need that much. The amount of water that they could actually put to use is probably—in the real near-term probably in the neighborhood of 150,000 to 250,000 acre-feet that they could physically use.

We have requests in for more than we have the physical facilities to actually deliver.

Mr. LEHMAN. Again, on implementing this COA, you don't need to build any additional pumps or modify the pumps that you have? You do it with what is now in place.

Mr. HOUSTON. We are not required—not obligated to build any new facilities to implement the Coordinated Operations Agreement. There are a number of proposals, number of strategies, all of us have underway, including the planning studies that have been authorized by this committee for the Bureau, studies underway by the State to modify their facilities.

The agreement provides the flexibility to add those facilities. It does not require they be put in place.

Mr. LEHMAN. I understand. I want to thank you.

Mr. MILLER. Thank you very much for your time and your responses this morning, and also thank you for all of your time and effort in the negotiations that preceded the agreement here. We have a number of questions that we would like to submit to you in writing, and I would ask that you would make every effort to get the answers back to us on a timely basis so that we can not leave this languishing in the committee.

Mr. HOUSTON. Certainly. Thank you.

Mr. MILLER. Thank you very much.

[EDITOR'S NOTE.—Chairman Miller subsequently sent to the various departments represented at today's hearing a number of questions to respond to in writing. Those questions and responses may be found in the appendix following Mr. Houston's prepared statement. See table of contents for page number.]

Mr. MILLER. Next we will hear from a panel made up of David Schuster, who is the general manager of the State Water Contractors; Tom Graff, who is an attorney with the Environmental Defense Fund; Richard Schafer from the Federal Water Contractors; Warren Abbott, general counsel, Metropolitan Water District of Southern California; and John DeVito, the general manager of the Contra Costa Water District.

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David, we will begin with you.

[Prepared statements of David R. Shuster, Thomas J. Graff, Richard L. Schafer, Warren Abbott, and John E. DeVito, with attachments, may be found in the appendix.]

PANEL CONSISTING OF DAVID R. SCHUSTER, GENERAL MANAGER, STATE WATER CONTRACTORS; THOMAS J. GRAFF, SENIOR ATTORNEY, ENVIRONMENTAL DEFENSE FUND; RICHARD L. SCHAFER, FEDERAL WATER CONTRACTORS; WARREN ABBOTT, GENERAL COUNSEL, THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA; AND JOHN E. DeVITO, GENERAL MANAGER, CONTRA COSTA WATER DISTRICT

Mr. SCHUSTER. Thank you, Mr. Chairman.

My name is David Schuster. I represent the State Water Contractors. That is an organization made up of 28 of the 30 public agencies who have contracted for State project water.

In the interest of time, I would just like to submit my statement to the record and just hit a couple of highlights.

As you know, of course, that the Coordinated Operations Agreement's major purpose is to determine this allocation of the water surplus in the delta to the two projects. And it also is to guarantee that each project bears its respective share of the water quality obligations in the delta and also the Sacramento Valley.

The ultimate outcome from this whole process is to determine how much water each project can deliver to their contractors. Since the State project right now does not have the capability of meeting the contractors' needs during a dry period, the stakes behind these negotiations are very high for us.

I think there is—we have already gone through the different agreements that have been made, May 16, 1960, the 1971 draft and the 1985. I just want to make the point that this is really almost 30 years' worth of work culminating in a technical methodology for splitting those shares.

One point that has been made today is that we have been able to come up with a procedural method whether the COA in the future can be changed or adjusted rather easily if the State standards are changed or if the facilities are built and so on.

In sort of a crude way, I would like to say that us engineers have got our job down, we can now respond very quickly to the politicians and the courts, if necessary. The decision to support the Coordinated Operations Agreement was—which we do—not necessarily an easy one for the State contractors.

As is usually the case with any kind of agreement of this magnitude there was lots of give and take on both sides, and pluses and minuses. Those are listed in my statement. I think I will skip those.

But I do want to hit some of the major factors that end up being the reason we decided to support them. The first one from us, which is very important to the State contractors, those of the delta, is that article 11 of the Coordinated Operations Agreement of the 1985 draft, requires the two projects to operate to the existing State standards before 1985.

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These standards will not be changed as long as the agreement is in existence unless the State board changes them.

The second reason that we are supporting this agreement is that if the standards are changed in the future and under the situation where it would be worse for us, if the Secretary should decide to not to meet those, article 11 basically says that we are going to continue the fight that we have going today.

I think something that is important to us, if there is a change, we think the nature of that fight would be significantly different than it has been for the last 15 years.

The difference we see is at this point in time the Bureau of Reclamation has been saying they do not have the authority to maintain any quality standards higher than that needed for their own agriculture water users.

I don't think they can any longer argue that if the coordinated agreement is executed after being ratified by Congress. Instead, I think the arguments in the future will be on whether the new standards are adequate in terms of meeting the needs of the delta for fish and wildlife, municipal industrial uses and the ag uses, and the balancing, and whether the new standards do a good job of balancing the needs of the delta and the estuary against the needs of the State and Federal contractors.

Basically, that kind of decision is consistent with what the State board is supposed to do themselves in setting these standards. We see this agreement finally bringing the Bureau into that standard setting process. We see that as being positive.

One of the third things we really like is that the methodology that I spoke to earlier that is built into the COA allows us to better plan for the future in terms of engineering sense, that we can now make fairly comfortable decisions in terms of how a new facility could be brought into the process and if standards that are being talked about should be implemented, what it would do to the two projects.

We have had problems in the past even with the existing draft to be able to do that. That is a plus.

More of a political decision talked about earlier, the whole Federal/State issue in terms of the quality of the delta has been one of the major issues that has hampered our past at the local level and at the State to move forward with completion of the State project.

We at this point in time are looking to ways of somewhat—pare away some of those issues so we would have a better chance in the future. And we see an agreement of COA as being a major step forward.

I guess the fifth one actually goes along with that. There are some issues that have hampered us, some areas where we have responsibilities in California that we don't think we can adequately address unless this is executed. Examples that have been talked about already today are the Suisun Marsh, where the two projects do have a negative impact on the quality.

There is no way that we can implement the contract that is being negotiated today and is almost complete without the COA first being in existence so we know what the Federal Government is going to do in the future as far as maintaining quality.

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Another example would be something that has been talked about all day today is the section 10(h) arguments in terms of it opens up the possibility for us to purchase water from the State on an interim basis or recoverable basis, and in turn, wheel water, transport water through our facilities to the Federal contractors.

It also makes it possible for the Bureau of Reclamation to lift the moratorium that they have had on since 1978 and move water or sell water to the Tehama-Colusa Canal folks who have been waiting—not patiently, but they have been waiting for a long time.

In summary, those are the major reasons why we decided to go along with it, and we strongly support it. Our board unanimously voted for the COA last week.

Our only recommendation is we would like to see the COA move forward as quickly as possible and would be opposed to any amendments being added to the authorizing legislation that would hamper that possibility.

Thank you.

Mr. MILLER. Tom.

Mr. GRAFF. Thank you, Mr. Chairman.

I, too, will request to the committee that I submit my testimony for the record and try to summarize it.

I assume you are going to want to ask some questions and that is probably more fruitful than running through the whole testimony. I don't want to be the first to violate the spirit of Disneyland here, so let me begin by crediting the State and Federal Government for doing some very creative and useful work in bringing this agreement this far and presenting it to the committee this morning.

There are some very important good things in the agreement, some of which Dave and others have touched on. Let me comment on two that I think are especially important. I do think it is quite remarkable—and I think it is right—Dave commented the engineers have done their job—it is quite remarkable that there is agreement on the basic engineering and hydraulogy and computer models that underlie how the two projects will meet their obligations in the delta in article 6. That is kind of forgotten when we focus on the delta article and on the wheeling and purchase article, but I think that is worthy of praise.

I also think that the delta article has some merit. It has some problems also, but let me comment first on the merit. It does finally acknowledge the Bureau's commitment to at least existing D-1485 standards and that is a substantial step in the right direction.

However, there are some problems, and I will turn to those now. I see three major problems with (b), draft COA, as it sits now.

One is it is for a limited duration. The chairman and others commented on that in the question period with Directors Houston and Kennedy.

Two, it leaves ambiguous what will be the Central Valley project's response when new delta standards—and I might add there has been very little talk today about San Francisco Bay, but hopefully in 1988 there will be San Francisco Bay protection standards adopted by the State board and approved by EPA.

What will happen then—it worried me considerably when Dave Houston responded to a question earlier today that all he expected in 1988 is fine-tuning of the delta standards. In our judgment,

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something a whole lot more than that is required if the bay and delta are to be protected.

What they need, basically, is not standards, but water. There is a stress here, which is, of course, why we are all here, between water flowing out the bay-delta for bay-delta uses and water being exported to the valley and to southern California.

Therefore, the third problem is one that probably is at the crux of our concern. The agreement includes provisions for the sale and wheeling of Central Valley project water to and by the State water project which will potentially commit a significant amount of additional water to delta export that would otherwise be available for delta outflow required to meet the needs of the delta of Suisun-Marsh and the San Francisco Bay.

Now, I don't want to say—and I hope the committee doesn't believe that there are no alternatives to this battle, this stress, between the bay-delta on the one hand and the valley and southern California on the other.

I think there are things that can be done that provide for the needs of the valley and of southern California, while not diminishing bay-delta outflow, and I think it is worth focusing a little on those today.

No. 1, you can get water to southern California from the Imperial Valley as we and others have recommended and I think active negotiations are underway. I think they could be done more aggressively and more quickly, but there is a great potential there.

I might say in credit the assembly office of research and four assemblymen earlier this week released a report—three of them from southern California, a bipartisan effort—recommending transfers, water transfers as a major new water supply for southern California and for valley farmers, as well.

And I think that really is the potential supply of the future. Aside from the transfer in southern California, there is a real potential in the valley itself. Within the San Joaquin, if westland farmers are looking for a way to reduce their drainage problems, one potential is to conserve water and sell it to willing buyers in the south.

San Diego, I know, has been up in the westlands looking to buy water. There are some major institutional obstacles to doing that. But it is a way to get extra water to southern California without increasing or diminishing bay-delta outflow.

Finally, although it may increase delta, export, it doesn't diminish delta outflow if water is conserved in the Sacramento Valley, for example, when rice farmers who now have surpluses that are beyond belief, change to other crops, use less water, they ought to be able to sell that water to the two projects, to other users south of the delta. That is water that would otherwise, not necessarily flow to San Francisco Bay, so at least you get—you don't get a diminishment of bay-delta outflow when you have an increase in valley and southern California use.

So the test for us, really, in this agreement is whether the agreement ends up in diminishing the stress between the bay-delta complex on the one hand and the valley and southern California on the other, and we think it fails that test.

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Some of this, I think, has been covered already, and is familiar to the committee, the question of being able to terminate this agreement. There are three separate provisions that allow the agreement to be terminated.

It is really—it is an interim agreement, as several of you have earlier commented, and it ought to be characterized as such. It is not a permanent agreement. It is maybe a 5-year agreement, and we do worry that 40-year contracts are going to be signed on the expectation of delta protection that only lasts 5 years.

Second, as to the commitment of delta protection, there is nothing in there about the bay. And the delta protection, as I said earlier, is only—takes you as far as the D–1485 standards.

I might comment on those standards that the Environmental Protection Agency when it approved the standards in 1980 did so on the basis of a condition, an explicit condition, that assumes that the fish and wildlife protection standards in D–1485 would be met. And yet as everyone knows, those standards have not even come close to being met.

What you have is a set of fisheries in the bay-delta that are in decline largely because of the reduction in bay-delta outflow and the increase in—or the level of export pumping.

So, again, I really want to emphasize that we are hopeful, or at least we are hoping—maybe we are not hopeful, given the appointments that have been made to this State water board in recent times—that the board will take a good hard look at those old standards and improve them substantially come 1988.

Finally, I think on the question of the wheeling and purchase agreement, that is kind of a new thing for us. Although it is true, as many have pointed out, that this agreement has been in negotiation for a long time. The wheeling and purchase provisions are brand new.

When we last saw the agreement at the end of January all that was in the agreement as far as article 10 was concerned was an agreement to negotiate and a promise that—and a termination provision that if the negotiations were not fruitful, the agreement could be terminated.

In the meantime, a lot more meat has been put on that article 10, meat which concerns us because it really will have the impact, if carried out—and I don't think that the other witnesses today would disagree with this—of substantially increasing bay-delta exports.

We think that the preferred way to get water to the valley in southern California ought not to be simply to sell off extra CVP water in storage, but rather, would be to look for conserved water among agricultural interests in the State. We could make some money on the sale of that water if the institutional constraints and barriers are lifted.

So, a major test for us is to shift the debate in California water from the kind of let's just sell that extra water that we have right now is wasting to the bay—which has been the Bureau perspective over time—to the perspective that is best exemplified by the report that the assembly office of research put out earlier this week, that says there is a lot of water in California if we manage it better.

Thank you, Mr. Chairman.

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Mr. MILLER. Thank you.

Mr. Schafer.

Mr. SCHAFER. Mr. Chairman, members of the committee, I am Dick Schafer. I am a civil engineer from Visalia. I am here representing Federal contractors, and I want to make it clear that they are of the San Joaquin Valley. I am also here representing the Mid-Valley Water Authority, which is made up of 29 public agencies; and the San Joaquin Valley Agricultural Water Committee, which is made up of 128 public agencies and private water companies from Tracy to the Tehachapis.

I, too, will submit my paper and merely cover highlights of it.

First of all, we view the Coordinated Operations Agreement as a textbook for the successful operation of these two vital water projects of California—the State water project and the Federal Central Valley project. We believe that that is the sufficient way to operate the projects of California.

Now, I want to make it clear that it is our understanding that this agreement was developed by the Bureau and the State's yield studies were made under the dry 7-year period, 1928–34. The 8.3 million acre-feet that we are talking about is water that is available under the driest period of record—and there is an abundance of water, which we call intermittent water, above that quantity.

Now, in response to the export from the delta, it seems to me that the delta standards have been satisfied under D–1485 by the results of this study, and the 8.3 million acre-feet is water that can be marketed, still the standards are met, and that is only during the dry cycle. So, there is a lot of water that is available for export for the Federal Central Valley project, the Mid-Valley Canal, in addition to the 8.3. I think we oftentimes forget that—an abundance amount.

I can't stress enough the fact that we, the contractors, believe that the COA should be executed. I will give you a classic example of the uncertainty that creeps into development of water resources projects when such an issue prevails.

In 1980, the Bureau and the Department concluded a study for feasibility of the Mid-Valley Canal. That study would have delivered 500,000 acre-feet to the San Joaquin Valley to assist in overcoming the ground water overdraft. The studies were terminated and the results were that until the water control considerations were resolved in the delta, those studies were put on the shelf.

Now, it appears to us with the COA in place that contracts that the Bureau might let, could include the 1 million acre-feet, could include intermittent water. It is our opinion that we could expect to receive as much as 1 million acre-feet on an average annual basis in the San Joaquin to solve the overdraft to take care of the projected needs.

We think the COA is an important protection and continues the commitment of the water necessary for the performance of the San Joaquin River exchange contracts which, in our opinion, are the keystone for the entire Friant division of the Central Valley project.

Obviously, we support the wheeling and exchange arrangements that, in our opinion, just provide for more efficient use of water and more efficient use of conveyance facilities.

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Now, it has always been our position that the water agencies—contractors—that any delta water quality CVP contribution other than that which is incidental to meeting the Tracy Pumps contractual water quality requirements is a new presently unauthorized project purpose and, therefore, execution of the COA requires the express authorization of the Congress and, further, that authorization must be limited to the precise terms of this agreement.

We, the contractors, are also of the opinion that the cost to the project for meeting the new water quality obligations under the COA must be designated a nonreimbursable cost and the allocation of the remaining CVP costs must be reexamined, particularly in light of the new water pricing policy.

Should congressional authority be required for CVP cost reallocations, that authority should be a part of the legislation authorizing execution of the COA.

We look at article 11 of the COA as providing a procedure to be followed should the State water resources control board establish new delta standards, and the provisions thereof do not preclude the Bureau from meeting a new delta standard so long as to do so would not be inconsistent with the congressional directives.

In conclusion, we believe the COA is equitable, is in the best interest of the contractors, and in the best interest for water resources development in California. We request your assistance in whatever legislation that would allow the execution of the agreement by the United States.

Thank you for your time.

Mr. MILLER. Thank you.

Mr. Abbott.

Mr. ABBOTT. Thank you, Mr. Chairman. I am Warren Abbott, general counsel of the Metropolitan Water District. I would also ask that my statement be made part of the record. Just a few comments.

Do you know, Mr. Chairman, Metropolitan imports over half the water that is used in California and that we have that within our service area over half the population of the State?

We are also the largest of the State water contractors and have an entitlement of nearly one-half of that project's yield.

Metropolitan endorses the provisions of the COA and we believe that they represent a fair and responsible approach to the problems. We see many benefits to southern California from this agreement. Perhaps first and foremost, it removes from the debate on State water policy a longstanding area of contention and divisiveness.

It provides a rational approach to meeting delta water quality standards. And Metropolitan now, as it always has been, is committed to protecting the delta.

It will result in an additional quantity of water for the State water project during dry periods and, of course, one-half of that will go to Metropolitan and southern California.

It opens the way to the purchase of CVP water, on an interim basis. This will allow time for some deliberation and study of what additional facilities are needed for the completion of the State water project.

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Finally, as I believe Mr. Costa and some of the committee members have indicated, it constitutes a major building block for the construction of a statewide consensus on solving the water needs of all of California.

Accordingly, we urge the immediate congressional approval of the COA substantially in its present form.

One last thing, Mr. Chairman, we would hope you would keep the record open for a while. I believe you received some letters and communications from various southern California interests. We understand that there are some more, and we would like to have them in the record when they do arrive.

Mr. MILLER. Thank you.

John.

Mr. DEVITO. Mr. Chairman, and members of the subcommittee.

My name is John DeVito, general manager of the Contra Costa Water District.

Mr. Chairman, in today's presentation I would prefer to comment to either the bad or the good impacts of COA on all affected parties rather than just the Contra Costa Water District.

Let me first join the others and comment on the two Davids—we think they have done a good job. However, we feel that in order to make the COA work, there is a need for some very important congressional action. We might say it's the 101st version of what Dave Houston mentioned, was the 100 versions of article 11, we think that that is where it turns around.

The whole issue is adequate water quality in the delta is the keystone of the water quality that the valley will get. If you take care of the valley in terms of water quality, we will be taken care of also.

I want to point out again, the valley is a major beneficiary of delta water quality, are major impacted as well as the rest of us.

Let us take a look at the question, I think they were well placed. Will the proposed COA adequately protect beneficial uses of water quality in both short and long term in the delta?

I want to say no, simply because the water quality in the delta turns around article A—article A is wrought with problems. No. 3 is the same thing.

Is the proposed agreement sufficiently flexible to meet current and future demands on the projects, including supplies necessary to protect delta water quality? I would have to say no again, because it turns again on article 11 and the problems with article 11.

The second question: Does the proposed agreement make additional water available for contracts? I don't know, Mr. Chairman. I have got a lot of confidence, as we all do, and respect for both Davids. I think they did a great job of trying to tie that down. I can't explain that 1 million acre-feet. The reason I can't is just prior to this era, right after the drought, the U.S. Bureau of Reclamation processed an analysis of the capability of the CVP. And in public, during sessions, they admitted that the CVP was 1 million acre-feet short of its capability as a result of their experience in the 1976–77 drought.

Now, as a result of COA activities, we end up with plus 1 million acre-feet. To me, that's a gain of 2 million acre-feet. I can't explain

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it, but I believe somewhere along the line they can, and probably will.

Let me speak to article 11. It is supposed to provide for any change and improvements in delta water quality standards. We believe that the present language where it specifically, or apparently, says that if there is an improved delta water quality, and we know there has to be an improved delta water quality, what will be the Secretary's capability.

We think the Secretary's hands are tied, simply because in this case he can only look at current congressional authority, congressional provisions. I think there is enough documentation, that I will come to later, that say that he will probably be in a position where he must resort to litigation.

Let me give you some examples. If you will refer to my testimony, part of my testimony, which is a resolution, page 3. The USBR has repeatedly represented before the State water resources control board on every decision from their own USBR decision D-990 in 1956, and I was a witness then, all the way through 1020, 1308, 1356, 1379, 1400, and now 1485, that they could not operate the CVP to provide water quality control in the delta simply because they were not congressional authorized to do so. They are in the record honestly and fairly saying so.

Look in the case of our own contract with the U.S. Bureau of Reclamation, we pay for 195,000 acre-feet in advance, every year, over $1 million. Yet, their record in the testimony honestly says we can only guarantee the Contra Costa Water District that water quality that would have occurred absent the project. Again, a concern that they have honestly expressed by limitation.

Let's take a look at section 9c of the Reclamation Project Act of 1939. This was the act that our forefathers, the late Tom Crossum, had a role in amending. It states very carefully that, "No contract relating to municipal water supply or miscellaneous purposes * * *." Now, miscellaneous purposes were in the record in the CVP as we think as salinity control in the delta. Water quality control in the delta as yet undefined, that came later with Porter-Cologne. But it says very clearly in that section 9c of the Reclamation Act of 1939, that for any of these purposes, they will not, or they will not impair the efficiency of the project for irrigation purposes.

Now, I remember every solicitor, going back to 1957, has carefully cautioned me, unless we get what you refer to, Mr. Chairman, a reauthorization of, or an extension of the authority, or an extension of the purpose of the CVP, the Secretary's hands are always going to be tied with these prevailing languages in the Congress.

There is another problem I have, Mr. Chairman, and I am going to try to get through this briefly.

If you look at 1485, or if you look at article 11, or if you look at the COA, I believe that in fact if the Congress approves, if the Congress is in fact improving a set, fixed number of standards in the Coordinated Operations Agreement. If you have a simple authority for the Secretary to sign the COA were attachment A or the miracle standards, you could be setting those numbers and impairing the State board on their Porter-Cologne from carrying out their

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process consistent with the provisions of the Federal Water Quality Control Act.

Let's talk about D-1485 and where the concern is. It is an interim standard. It is an incomplete standard. It is an inadequate standard. If you take a look at the controls—wildfish and agricultural controls are in effect, say, I believe, February through July 15—the entire delta is in good shape. We get good water quality. Even including the M&I standards and adding 150 chlorides for certain days, but when the prevailing standards for Contra Costa Canal intake, the controls, after July 15, it is 250 parts of chloride iron. And, likewise, the decision, D-1485, speaks to those limits to the State Water project contractors at the Clifton Court, even though their contracts point to an objective of 100 or 110 parts of chloride iron—D-1485, I believe, prevails with a maximum of 250. Likewise, the Tracy Pumps, are tied to this 250.

Now, you all know, that under the Safe Drinking Water Act, 250 is an acceptable—not health parameter—in the standards, they are anesthetic value. So people can live with 250 chlorides, unless you have a propensity for cardiovascular problems.

I have heard Congressman Pashayan, Congressman Coelho, and Congressman Lehman say over and over again, if there's only four criteria for the valley water, it is quality, quality, quality, quality. And 250 chlorides means TDS in excess of 500, maybe as high as 600—so, 250 may be acceptable to most human health, but I can see it as totally unacceptable to the salt balance health of the valley as well as the plant life health of the valley as well as conservation efforts.

We all know that the Department of Agriculture will tell people over and over again, when you have chlorides, or total salts, in those amounts, that it could be damaging to soil health and plant life health—we use more water in each irrigation to press that salt amount past the zone, then you use more water to irrigate. So it is adverse to the conservation process.

Let's just take a look at the exhibits I have for a moment, if you please.

If you take a look at the colored map, it points out very clearly of how delta water quality, either impacts adversely or beneficially, the vast agricultural impact industry of this State, which is a very important one, both here and the Nation.

The red area—first of all, very quickly—the big blue area, for 1981, this is for the water year, October 1 through September 30, 1981, during that year the system produced about 12.5 million acre-feet. These are the records of both the department of water resources and the Bureau of Reclamation. The in-delta use was approximately 1.1 million acre-feet.

Then the total of the others are the exports. The exports are in the order of 5.8 million acre-feet. The delta pumping was 4.6 million acre-feet. That's the upper right-hand tally next to the map. From San Luis, which was also pumped for the delta, was 1.2 million acre-feet. So the total pumping for the delta was 5.8 million acre-feet.

Let's look at the table to the left, Project Deliveries. The San Francisco Bay area from the State water project was 200,000 acre-feet, or roughly 3 percent. That's Alameda County Water District,

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Santa Clara Water District, Alameda zone 7—4 million acre-feet, it was the San Joaquin Valley used, that is 83 percent. And, of course, 800,000, 14 percent, went over to the Tehachipis.

Now, if you will look at this—Mr. Chairman, you are probably sensing that my entire plea here is on behalf of the delta water quality improvement for the valley, and you are right, that's 83 percent of the use. But be assured, if we had delta water quality that takes of the valley, it will automatically pick up your 2 percent in Contra Costa County. That happens to be the use of the Contra Costa County Water District as well as the offshore use is about 2 percent. And be assured, I am not ignoring your district. If we take care of the valley, they will automatically pick up your concerns and be the 2 percent. I think that is an exceptional good example of what the ratios and benefits of use are.

Let's take a look at the last page here, and it shows the red and blue areas of quality. You have all seen these maps, and it shows the very high quality in the eastern delta and the saline water intrusion that affects the western delta and eventually gets to the pumps. You notice the areas get red as they hit the pumps, the export pumps—that is an indication, of course, of salt loading.

Take a look at your last page, your last exhibit. This was put together by one of my staffers. They merely took the amount of water pumped by the delta—Mendota Canal and the State aqueduct and averaged the total dissolved salt for that period of time.

Let's take a look at 1981, the same year depicted in the amount of water that is moving south. The total salt—tons of salt—was approximately 2.3 million tons, that went through the State and Federal pumps into the San Joaquin Valley. Of that, 1.5 was the Delta-Mendota. Again, if we need improved delta water quality in order to take care of the millions of tons of salt we are exporting to the valley, if we take care of the delta water quality for the exports, the delta will come along and be picked up.

Let me move back to some other concerns. I believe that section 11 as it now stands virtually commits the COA process to litigation. For example, you have all questioned what happens when delta water quality is improved, which is going to happen, because as we mentioned earlier, D–1485 interim, incomplete, and it is going to be reopened in 1986. If you look at the basing plan of 8 years ago, it is going to include bay and Suisun Marsh and others. It is going to require more water. We know that, we expect that.

Now, under current law, when those improvements are submitted by the State water resource control board, assuming they will be, and if the Secretary finds that it is in conflict with the project, with the provisions of the congressional authority, or if it is a conflict with existing contracts, only the director of the department of water resources must comply. Therefore, here again, the State water project contractors are going to have to bear an unfair version, or an unfair portion, of the responsibility for protecting the delta until such time as the litigation process, or the legislation process, is resolved.

There are a few other items that I think I should mention that causes us some concerns. There are no provisions in the coordinated agreement to take care, for example——

Mr. MILLER. If you would please summarize because we are going to be called to vote here and I want to allow for questions.

Mr. DEVITO. There are no provisions in the COA to provide for the late Senator Miller's amendments to the water code 12202, which is a substitute water supply, for the offshore supplies. Currently, only the State of California is responsible. Our contract, the city of Antioch's contract provide for only one-third of that provision, of that responsibility, because the Bureau has always said we don't have the congressional authority to participate even though we know that operation of the Central Valley project does, undoubtedly, affect those offshore uses.

The D-1485 puts the M&I standards of Antioch into the Contra Costa Canal system, but the other substitute water supply does not provide for at no additional cost.

Let me just say that we think the three elements of congressional legislation that we are submitting—the ones that you have mentioned, Mr. Chairman—declaring that a purpose of the Central Valley project with the water quality standards as from time to time laid down by the resources board, consistent with the Federal Water Quality Control Act, will do that.

We think, further, that conditioning—all of the contracts for the water quantity necessary to do will make it work, but will also speak to your concerns, Congressman Pashayan, and others, it will be the first credible, compelling reason to build new water in order to meet both delta water standards and the needs of the valley.

Thank you.

Mr. MILLER. Thank you.

Do all members of the panel agree with, I think it is the testimony of Mr. Schafer and Mr. DeVito, that this clearly requires authorization by the Congress to go forward with the COA? Is there any disagreement on that?

Mr. ABBOTT. With one modification—we think because it has the wheeling provisions in it, and the sale, that it does.

Mr. MILLER. OK.

Mr. GRAFF. Mr. Chairman, I think I agree with what Mr. Abbott said, but I want to emphasize that point. I don't believe that a contract in which the Secretary of the Interior commits the Bureau to protecting the delta necessarily requires congressional authorization. I want to make that clear. Legally, under all the cases so far, it would appear to us that the Secretary has the authority to take that step without congressional authorization.

Mr. MILLER. But you would agree that it is not one of the stated purposes in the 1937 act?

Mr. GRAFF. Yes.

Mr. MILLER. It is not one?

Mr. GRAFF. It is not one.

Mr. MILLER. But the Secretary has been compelled since to do it.

Mr. GRAFF. Under the cases, you know, State water law, Fish and Wildlife Coordination Act, but various other authorities have arisen over time that have given the Secretary that authority.

Mr. MILLER. You are a pretty good litigator. What is your impression of what John said about article 11 more or less being a real invitation to litigation with the changes that we can expect in the State standards after 1988?

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Mr. GRAFF. I think there will be litigation if the State does what it ought to, which is tighten those standards. I am a little less optimistic, I think, maybe than he is, that the State will come through for us at this point. But I do not think you need article 11 for that. I think the Feds are perfectly capable of litigating whether or not article 11 is in place.

Mr. MILLER. Do you believe that the bay will be included in those new standards?

Mr. GRAFF. In a significant way—you know, we are going to be in there litigating and more actively this time than we were 10 years ago.

But do I think that the nominees that Governor Deukmejian has put on there will be sympathetic to the bay? No.

Mr. MILLER. What is the opportunity for the legislature to review the new standards?

Mr. GRAFF. They can always pass legislation that addresses the point. There is a bill in the assembly now sponsored by Assemblyman Shure that tries to push the bay forward. They have some chance of passing, even, but it is not going to set specific numbers. When it gets down to the nutcracker——

Mr. MILLER. Are there two arguments there? One is whether or not to include the bay, and then if you make the decision to include the bay, the question is, what are the numbers?

Mr. GRAFF. Right. It is a two-step process.

Mr. MILLER. OK.

Mr. GRAFF. I might say one thing that is important here, and it hasn't been mentioned. It is a major question in my mind, and that is, will the subsequent agreement, the wheeling and purchase agreement, be subject to congressional authorization?

I would think at the minimum, this committee would want to make it explicit that that agreement has got to come back to Congress for approval, that it can't be signed and bay-delta water exported without at least that crack of the Congress looking at that matter.

Mr. MILLER. Any other comments?

Mr. SCHUSTER. I have got one, Mr. Chairman, on your question. The State contractors with Tom in some sense, that we don't believe the Federal Government needs congressional authorization legally to sign the agreement but, obviously, we won't get an agreement unless they got it, so it became more of a practical decision on our part to support. On Tom's point he just made in terms of congressional authorization on any kind of purchase agreement that may occur between us and the State and the Bureau is that I think that it will have to come back anyway for some issues such as service area authorization. You know, we want to purchase water from the Bureau and we want to deliver it to Metropolitan Water District and on the CVP service areas, we will be back for that reason. More than likely, there will be some discussion with Congress on the Reclamation Act, how it applies; right now, we think it does apply to other State contractors, and whether it should in those kind of questions. We haven't got answers yet, but we think that will probably be back here at that point in time. So to some extent, I think it will. For us to purchase water for CVP will require congressional action of some kind.

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Mr. MILLER. Mr. Pashayan.

Mr. PASHAYAN. Thank you, Mr. Chairman. I appreciate the variety of testimony from the witnesses.

I should just simply like to ask the lawyers something that I was bringing up earlier. If a future Congress passed directives inconsistent with new delta standards, do you see any problems with that in terms of litigation, and what a court possibly might do in the sense of the viability of the COA? So any of the lawyers that care to answer that question——

Mr. ABBOTT. It seems to me that what you are positing, Mr. Pashayan, is a clear case of a supremacy clause problem. And to the extent that the COA is inconsistent with that, it has to fall. And if it is inoperable, then I think your point about, well, then, its purpose has been destroyed and the agreement would fall apart.

Mr. PASHAYAN. Do you think a court could cancel the agreement?

Mr. ABBOTT. I think if the Department went into court and said this is no longer feasible.

Mr. PASHAYAN. It all hinges on how you interpret that paragraph in section (b). Well, not all of it, but in other words, you heard the testimony from the State and from the Federal Government that they anticipated section (b) to include future congressional directives. So, we do not know what we are dealing with right now, possibly.

Mr. ABBOTT. We know what the current directives are.

Mr. PASHAYAN. Yes, but we do not know what the future directives might be.

And since they contemplate future directives——

Mr. ABBOTT. The possibility of future directives.

Mr. PASHAYAN [continuing]. The possibility is there.

Mr. ABBOTT. You could not possibly do away with that. That is a right that Congress has in the Constitution. The agreement could not waive that right to change those directives.

Mr. MILLER. It certainly would not be the intent of this chairman to have future directives that are inconsistent with——

Mr. PASHAYAN. Well, wait, I think it would be possible. I see what you are saying, that Congress could go outside and get some sort of action. But within the terms of the contract, the contract could read only present congressional directives.

Mr. ABBOTT. In which case, if there were new congressional directives, then you would have the problem of the agreement falling apart.

Mr. PASHAYAN. I see, I see.

Would any other lawyer care to comment on that?

Mr. GRAFF. I would just add a comment, and that is that they do not need to litigate to set the agreement aside because there are all these other provisions that they can invoke, you know, a year of negotiation here, a year of arbitration there, and they can get out anyway. So, I would think that there, either party—but most likely the Federal Government's preferred response to trying to litigate an issue in court would be simply to say, OK, let's go through one of these negotiation processes and then get out of the contract.

Why would they want to litigate?

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Mr. PASHAYAN. John, in your testimony, were you disagreeing with Mr. Kennedy and Mr. Houston when they said that section (b) contemplated future congressional directives? I did not quite understand what you were saying on that. Or, did you address that at all? If you did not, that is fine, we do not need to go into it.

Mr. DEVITO. Congressman, are you speaking to section (b) of article 11?

Mr. PASHAYAN. Yes. I thought you commented on that saying that you interpreted it as meaning only present congressional directives.

Mr. DEVITO. No, section (b) tells me, and that is the one I am concerned about, that should the United States determine that new delta standards are inconsistent with the congressional directive, it is good morning, judge. And if you had the proper authorization for the CVP to embrace delta standards, you would not even need section (b).

Mr. PASHAYAN. Thank you.

Mr. MILLER. That is really the crux of where we go from here, when we talk about authorizing water quality as a purpose of the CVP, meaning for that purpose, it is also a question of what extent it embraces the COA process, recognizing that those standards are open for review by the water resources board from time to time. I think that is one of the considerations this committee would have, because it would certainly be foolhardy for those of us from the delta to engage in an agreement that is going to fall on its own sword because of the rigidity of that agreement with respect to the interest of the Congress.

I think it is incumbent upon us to remove those barriers to the smooth operation of the COA. I don't know what all of them are. John, you have touched upon some of them in your testimony. But I can tell you, we are going to scour the act to see what exactly they are, because, I will be damned if we are going to sign up on a COA and then find out that we have in current law all of the handles for the attorneys to then invalidate the COA after contracts have been let. That is the old peril.

I say that in absolutely good faith. If we are building the COA as the cornerstone of the operation, then we have to make sure that in fact it is given some leeway to operate so this agreement can live, so the wheeling agreements can go forward, so the changes for the south delta, the changes for the bay can be anticipated in this new relationship between the State and the Federal Government.

Mr. PASHAYAN. Mr. Chairman, I agree with what you say but also, as we have been saying, future congressional directives can have a bearing.

Mr. MILLER. There is no question about that. Future congressional directives, I will worry about in the future. Right now I have to worry about where it is conceivable that the current law is inconsistent with the operation of the COA. That is one that concerns me, especially when we know we have on the horizon a major change—or we can say the refining or a major change, whichever happens, of the very standards that the COA is designed to embrace.

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I think that we have got to have something that is flexible enough to allow that to happen, otherwise, we will be right back all over again with many of the same problems.

Mr. PASHAYAN. I wonder if the orthodox opinion prevails that congressional authorization is required, if that authorization were worded properly whether the act authorizing this agreement would supersede other acts already on the book.

Mr. MILLER. That has to be raised and I think people are going to have to give some thought to it. We are going to clearly be back to all of you as we start to march down that path. We are going to make no attempt to delay the implementation of the COA, but we are also going to make sure that we do it right so that we don't get bogged down in all of the past problems that we have had before.

Counsel informs me that we have some additional questions that we would like to submit to you in written form. Again, we ask that you respond to those on a timely basis. Members of this panel have raised some solid concerns about exactly what kind of agreement we have here.

[EDITOR'S NOTE.—Chairman Miller subsequently sent to the various witnesses represented at today's hearing a number of questions to respond to in writing. Those questions and responses may be found in the appendix following Mr. DeVito's prepared statement. See table of contents for page number.]

Mr. MILLER. Any other questions?

Mr. PASHAYAN. Mr. Chairman, just let me add, you know the approach I have taken on this, and that is a unified approach on a broad front. Just briefly, John, if you could—we have got—if we sign this thing today, approve it today, we have 5 years before it really becomes a permanent agreement.

Speaking on behalf of your people in the delta region, are you planning to help us along with the Mid-Valley Canal in the meantime, and some of the other projects that we in the Central Valley need?

Mr. DEVITO. I knew you would raise that question, Congressman.

Mr. PASHAYAN. Then you must have a sun coming up in the morning. And then you must have a good and brief answer ready for us.

Mr. DEVITO. I respect your concern.

As Congressman Miller pointed out, if the COA is going to be the cornerstone of how we manage the water supplies on behalf of all of the uses, then we have got to eliminate, by congressional action, the potential self-destruct elements that we have all identified.

Mr. PASHAYAN. The question is, when we eliminate them. Do we eliminate them before anything has taken place? Any other things that have taken place, like Mid-Valley, or after some concrete steps? That is the question.

Mr. MILLER. Certainly before long-term, final contracts.

Mr. PASHAYAN. Well, that is all right, George. I want to get some of these other things on the way. I understand what you are saying but, you know, we have got some good folk down there that want to get some things going, too. I am not asking to drive too hard a bargain. I just want to hear some good things what you all are going to do to help us in the next 5 years before this thing becomes set in concrete.

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Mr. DEVITO. Congressman, I started to say that if we can get the congressional action to make this the cornerstone of management for the resources—and the ones we are suggesting to eliminate those self-destruct elements now, first, and get it operating as soon as possible, not wait 5 years. Get the COA operating with the proper congressional action, I think that will be the cornerstone of justifying the projects such as the Mid-Valley, Los Vaccaro——

Mr. PASHAYAN. And a whole handful?

Mr. DEVITO. And a whole handful.

Mr. PASHAYAN. But we have got an interim step now. If we sign this thing, we are further along the line toward a permanent COA than we are without it.

Mr. DEVITO. You bet.

Mr. PASHAYAN. I should like to have you say in that interim you will begin to help us with some of the things we need. I do not see anything wrong with that.

Mr. MILLER. Will the gentleman yield?

Mr. PASHAYAN. Conditionally, of course, on the condition that nothing be done for us until you are absolutely protected. I am not trying to——

Mr. MILLER. If the gentleman will yield, one of the clear concerns my opening question raised is we end up with a 5-year contract that can self-destruct, and somebody else ends up with a 40-year long-term contract.

What is the status of those contracts that move us forward on Mid-Valley and other projects in the valley? Are they interim? Are they short term? Are they recallable? Some of that has got to be brought into consideration, otherwise, we will find that the bottom of the delta has dropped out and then we will have an agreement that is self-destructive.

I don't think that is the intent at all in a negotiation between the State and the Federal Government.

Mr. PASHAYAN. Nor is it, Mr Chairman, my intent. And I am sure that you trust that it is not my intent. But I just should really like to see some positive steps being taken between now and 5 years from now where at some future between now and then, all these things can be taken care of—some concrete steps for Mid-Valley and the other project you are talking about, and at the same time, a long-term commitment to protect the delta.

Do you like that, John?

Mr. DEVITO. With a properly legislative COA——

Mr. PASHAYAN. I am talking about properly. Do you like that approach?

Mr. DEVITO [continuing]. In place, first. That would be the strongest for the——

Mr. PASHAYAN. If we do not do that, how about what I am talking about?

Mr. DEVITO. We will be there, but it is first come, first.

Mr. PASHAYAN. I do not know, I do not know, if we can do it at once.

Mr. GRAFF. Mr. Chairman?

Mr. MILLER. Tom.

Mr. GRAFF. I have a comment to that. I think we all do a disservice to, whether it be bay constituents or valley constituents, if we

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expect that what is going to follow this is a major new set of project authorizations in California. I know sometimes the delta interest and environmental interest may have been guilty of overselling a COA as this is the cornerstone of, you know, bay-delta protection for all time. That is equally true, though, of the valley people. Just because there is a COA there are a lot of steps to get to major new water delivery projects in California.

My comment to the Congressman, Congressman Pashayan, is, that priorities are going to have to be set among valley interests. From our point of view, we have already said in our testimony that the major new water, if there is going to be any, is in water conservation and transfers.

Second, that I see the big problem, and the one that we are working with you and others in the valley on, is really drainage and not new water. One of the ways to solve the drainage problem is to reduce water export into the valley and not increase it.

Mr. PASHAYAN. Tom, I understand what you are saying, and that is an important observation. I overstated, perhaps, the case of building new projects. I did not mean to exclude the contribution of what you are talking about—vital concerns.

I am just talking about what and when. There are a lot of people in the valley now who do believe, fervently believe, that once the COA is signed, and that is going to lead to projects. That is why they are behind the COA.

They want to protect the clarity of water in the delta but they also want their projects. And they really believe it is going to follow. Now, if there is going to be too much difficulty, then some of that belief in the valley, some of that faith in the valley, may be shaken a little bit. That is why I am suggesting that we use this 5-year period to do exactly that, to work with your group and to work with the groups that want to build some of these projects.

I am not trying to get ahead of anybody here. But I am saying that I think if we all put our shoulders to the wheel, we could work some of these things out and then solve several problems at once—and the leading problem being the long-term protection of the delta. Nobody is trying to get around that.

Mr. MILLER. Mr. Schafer.

Mr. SCHAFER. Mr. Chairman, I would like to add a couple of comments.

The conservation issue—it seems to us that the wheeling and exchange arrangement is the way that we do conserve water; the way that we do use the existing facilities. We are currently wheeling water through the State aqueduct. We are paying a price that the State establishes and we are moving CVP water into the valley to help the overdraft.

It seems to me that that's an important way to conserve water that would otherwise flow to the ocean unnecessarily, and deliver it to lands within the San Joaquin Valley by an exchange arrangement, by use of existing facilities.

We project that 200,000 to 300,000 acre-feet of water could be brought into the valley by existing facilities through exchange, it would be conservation of waters that would otherwise flow unnecessarily, and it would help to overcome the overdraft and satisfy the needs in the valley.

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Consequently, that wheeling arrangement is a very important aspect, and we need it now until the Mid-Valley Canal is constructed.

Mr. PASHAYAN. Mr. Schafer, I appreciate what you are saying. I should think, so does the chairman, but I think you are using the word "conserve" differently from the way Mr. Graff was using it. I think he was talking about something else when he was talking about conserving. Both interpretations of the word, both of what you are talking about, I think, are important in this.

More important than either interpretation of the word, yours being, let us take some water flowing to the ocean, and that is conserving water, his meaning, let us not use a gallon of water if we can possibly use a half a gallon of water for the same purpose. I think that is what Tom is talking about.

We have 5 years to work on this thing. That is the point. I should like to see, at the end of 5 years, not just the delta people satisfied and comfortable, but a few other people satisfied that they are beginning to get what they want, too—that is all I am talking about—including the point of view that Tom Graff is here to represent.

So, I think the best thing the COA is doing is kind of putting a deadline on us. You know, sometimes we do not do what we are capable of doing until we are under some kind of a deadline. So it might have that very beneficial purpose, if nothing else.

Mr. SCHUSTER. Mr. Chairman, if I could?

Mr. MILLER. Yes.

Mr. SCHUSTER. I would like to respond to John's and your concern about the authorization issue strictly for a later discussion as we go through this process.

We believe the State water contractors believe, No. 1, that if Congress should authorize the Bureau to execute the COA as it now stands, water quality does become an authorized purpose. COA also dictates, in terms of future methodologies for salinity and water quality project, that methodology is to put water quality first. So I think there is also priority implied there. And any kind of jockeying for position in terms of where we are going to put water quality on the list of the 1937 act probably is relatively risky in the delta and possibly the State contractors, is one reason I am concerned.

The second reason, on the termination clause, which we, too, were uncomfortable with. I just want to remind you that if the Bureau should in the unlikely possibility—I doubt it will happen—the Bureau should walk away from the COA. We, the State contractors, are at as much risk as the delta users are. It is very possible that we would have to make up for the water supplies that they do not put out for delta water quality may have a very devastating impact on our users.

The other possibility would be that we would be able to, through the courts, to severe the responsibility of the two and the State project would not be hurt in that case, and the delta would. So, some sense of delta landowners and other users interested in the delta and ourselves are partners. We are both uncomfortable with that. But we, too, will be watching the Bureau. We, too, are watching the termination clause and are very hopeful that—in fact, are

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fairly comfortable in the practicality of the case. People said us water users, both the State and the Federal users, that the delta water quality issue can block us from doing anything and I don't think that kind of leverage goes away with the signing of the COA.

Mr. MILLER. Thank you.

John.

Mr. DEVITO. Mr. Chairman, I would agree with Dick, that if you acted on this particular measure as it now stands for one set of delta water standards would be authorized by the Congress, that is, D-1485, inadequate, incomplete, and interim, but it would take your suggestion to change the authorization of the project to make future delta water quality standards an authorized project purpose.

Mr. MILLER. Thank you.

Let me thank you again, and I know that you came on rather short notice, and I appreciate it because I think it was absolutely essential that we had this kind of public comment after Dave Kennedy's and Dave Houston's discussion so that the committee could see that there are concerns with the agreement. While there is general endorsement of the agreement, I think there, in fact, have been some concerns raised. I want to thank you very much for your time and your help and I look forward to some additional help from all of you as we get down to finalizing this process.

Thank you.

With that, the committee will stand adjourned.

The record will be kept open, as suggested, Mr. Abbott, for 2 weeks, so that additional correspondence can be received on this subject.

[Whereupon, at 1:15 p.m., the subcommittee adjourned.]

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APPENDIX

THURSDAY, MAY 23, 1985

ADDITIONAL MATERIAL SUBMITTED FOR THE HEARING RECORD

TESTIMONY
OF

JIM COSTA
MEMBER OF THE CALIFORNIA STATE ASSEMBLY
CHAIRMAN, WATER, PARKS AND WILDLIFE COMMITTEE

BEFORE THE

SUBCOMMITTEE ON WATER AND POWER RESOURCES
HON. GEORGE MILLER, JR., CHAIRMAN
HOUSE SUBCOMMITTEE ON INTERIOR AND INSULAR AFFAIRS
WASHINGTON, D.C.
THURSDAY, MAY 23, 1985

Mr. Chairman and Members of the subcommittee:

My name is Jim Costa and I am Chairman of the Water, Parks and Wildlife Committee of the California State Assembly. Thank you for the opportunity to speak today on the agreement between the United States of America, and the Department of Water Resources of the State of California, for the coordinated operation of the Central Valley Project and the State Water Project.

The United States and the State of California entered into an agreement on May 16, 1960, Article 16 of which recognizes the need for criteria for the coordinated operation of the Central Valley Project and the State Water Project. The agreement before you today recognizes that certain basic assumptions of the 1960 agreement require modification due to subsequent developments and changes in the two projects.

The most significant of these is the August 1978 decision by the California State Water Resources Control Board to impose requirements on the water right permits of the two projects pursuant to the board's reserved jurisdiction over these permits. Decision 1485 requires the CVP and the State Water Project to bypass natural flow and release stored water needed to protect beneficial uses of the waters of the Sacramento-San Joaquin

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Delta. The board, at the same time, adopted a water quality control plan for the delta and Suisun Marsh, pursuant to its authority under the state Porter-Cologne Water Quality Control Act and the federal Water Pollution Control Act.

The Sacramento-San Joaquin Delta is one of California's most valuable resources. The Sacramento and San Joaquin rivers drain almost 40 percent of the state, converging at the delta to provide water for people, industry, recreation, agriculture, fish and wildlife. In addition, water is exported to about 90 public agencies which have long term contracts with the federal and state projects. These agencies serve about one third of the land area and two-thirds of the population of the state. Delta waterways provide a rich repository of aquatic life, including more than a dozen species of commercial and game fish. Delta waterways are a major resource for fishing, boating and scenic enjoyment, while the delta islands are a major resource for agriculture, hunting and natural gas.

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THE SACRAMENTO-SAN JOAQUIN DELTA IS GREATLY INFLUENCED BY A NUMBER OF COMPLEX INTERACTIONS. INFLOW PROVIDED BY THE TWO RIVER SYSTEMS OF THE SACRAMENTO AND SAN JOAQUIN VALLEYS, WATER EXPORTS, CONSUMPTIVE USES, UPSTREAM DIVERSIONS, TIDAL ACTION, LEVEE FAILURES, POLLUTION, AGRICULTURAL RETURN FLOWS AND RECREATIONAL ACTIVITIES ARE ALL RECOGNIZED FACTORS THAT, TO VARYING DEGREES, AFFECT WATER QUALITY AND THE FISH AND WILDLIFE RESOURCES OF THE DELTA. ALTHOUGH NO ONE FACTOR CAN BE SINGLED OUT AS THE PRINCIPAL INFLUENCE, THE RESULT IS A CONTINUING DETERIORATION OF THE DELTA AS A NATURAL RESOURCE.

THOSE OF US WHO HAVE SUPPORTED WATER DEVELOPMENT HAVE BEEN FRUSTRATED FOR OVER A DECADE AT THE INABILITY OF THE STATE TO MOVE AHEAD WITH A PLAN THAT ENHANCES THE DELTA, AND PROVIDES FOR ADDITIONAL WATER TO BE SHIPPED TO OTHER REGIONS OF CALIFORNIA. ISSUES THAT HAVE BLOCKED ATTRMPTS TO MOVE AHEAD IN THE LEGISLATURE AND AT THE BALLOT BOX INCLUDE (1) PROJECT IMPACTS ON WATER QUALITY; (2) PROJECT IMPACTS ON FISH AND WILDLIFE; AND (3) WATER CONSERVATION. I BELIEVE THE C.O.A., IF RATIFIED AND SIGNED, WOULD HELP TO RESOLVE SOME OF THESE ISSUES, SO WE MIGHT MOVE AHEAD.

WE CONNOT REFUTE THE CHARGE THAT OPERATION OF THE FEDERAL AND STATE PROJECTS DEGRADES WATER QUALITY AND ADVERSLY IMPACTS FISH

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AND WILDLIFE. FOR INSTANCE, WE KNOW THAT OPERATION OF THE EXPORT PUMPS OF THE TWO PROJECTS IN THE SOUTH DELTA SO REDUCE WATER LEVELS AND TIDAL CIRCULATION THAT THE BENEFICIAL USE OF WATER BY

LOCAL FARMERS AND RESIDENTS IS AT TIMES PRECLUDED. OPERATION OF THE PUMPS REVERSE THE DIRECTION OF WATER FLOW IN THE WESTERN DELTA THEREBY CAUSING WATER TO BE DEGRADED BY OCEAN SALINITY INTRUSION. DRAWN WITH THE FLOW OF WATER ARE LARGE NUMBERS OF FISH, AND FISH LARVAE AND EGGS, PARTICULARLY STRIPED BASS. THE REVERSE FLOW ALSO FORCES THE PROJECTS TO USE MORE PROJECT WATER SUPPLY FOR MAINTENANCE OF OCEAN SALINITY CONTROL. UPSTREAM DIVERSIONS ON THE SAN JOAQUIN RIVER ALSO IMPACT THE SOUTH DELTA. WHILE OPERATIONS OF THE STATE WATER PROJECT CAN BE MODIFIED AT TIMES TO REDUCE THESE IMPACTS, I'M CONFIDENT THAT CONSTRUCTION OF THE PROPER FACILITIES COULD ELIMINATE THESE IMPACTS AND ALLOW THE STATE AND FEDERAL PROJECTS TO MEET DELTA WATER QUALITY REQUIREMENTS WITH LESS PROJECT WATER SUPPLY.

ADOPTION OF COORDINATED OPERATIONS AGREEMENT BEFORE YOU TODAY WILL ENSURE THAT BOTH PROJECTS REDOGNIZE THEIR OBLIGATIOINS TO HELP MAINTAIN THE WATER SUPPLY AND WATER QUALITY STANDARDS FOR THE DELTA AS SET BY STATE WATER RESOURCES CONTROL BOARD.

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YOU ARE, OF COURSE, VERY MUCH AWARE OF THE PROBLEMS OF AGRICULTURAL DRAINAGE IN THE SAN JOAQUIN VALLEY. THESE PROBLEMS ALSO AFFECT OUR ABILITY TO MOVE AHEAD ON VARIOUS ASPECTS OF THE STATE WATER PROJECT. A FINANCIAL AND PROGRAMMATIC COMMITMENT BY FEDERAL AND STATE AGENCIES, AND CONGRESS AND THE STATE LEGISLATURE, TO ADDRESS THESE PROBLEMS COULD HELP THE EFFORT TO MOVE AHEAD ON THE PROJECT. IRRIGATION MANAGEMENT PRACTICES AND TREATMENT TECHNOLOGIES MUST BE IMPLEMENTED TO PREVENT WATER QUALITY DEGRADATION FROM OCURRING.

PREVIOUS ATTEMPTS TO MOVE AHEAD ON STATE PROJECT FACILITIES IN THE DELTA ALSO HAVE BEEN BLOCKED, IN PART WITH THE CHARGE THAT THE SAN JOAQUIN VALLEY AGRICULTURAL COMMUNITY HAS NOT USED WATER EFFICIENTLY. A RECENT STUDY CONTRACTED FOR BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, STATES THAT CALIFORNIA LEADS THE NATION IN WATER CONSERVATION PROGRAMS. I BELIEVE THE AGRICULTURAL COMMUNITY HAS PLAYED A PART IN THIS SUCCESS BY TAKING GREAT STRIDES TO CONSERVE WATER IN THE LAST TEN YEARS THROUGH THE LINING OF DITCHES AND CANALS, THE USE OF LASER LAND LEVELING TECHNOLOGY, AND IMPROVEMENTS IN IRRIGATION MANAGEMENT PRACTICES. THERE IS MORE WHICH CAN BE ACCOMPLISHED, HOWEVER. I HAVE AUTHORED LEGISLATION TO PROVEDE STATE FINANCIAL ASSISTANCE TO LOCAL AGENCIES FOR VOLUNTARY, COST-EFFECTIVE, CAPITAL OUTLAY WATER

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CONSERVATION PROGRAMS. MY COLLEAGUES IN THE LEGISLATURE ARE WORKING WITH ME TO ENSURE THE STATE'S CONSERVATIOIN PROGRAMS ARE IMPROVED AND EXPANDED. HOPEFULLY, THESE LEGISLATIVE EFFORTS WILL PROVIDE THE EVIDENCE NEEDE TO REFUTE THE CHARGE THAT THE AGRICULTURAL COMMUNITY WASTES WATER, AND MORE IMPORTANTLY, IS TAKING A PROGRESSIVE ROLE TO CONSERVE THIS VALUABLE RESOURCE.

WITH THE ABOVE ASSURANCES, IT MAY BE POSSIBLE TO MOVE AHEAD WITH VARIOUS ASPECTS OF THE STATE WATER PROJECT.

I'D LIKE TO COVER ONE FINAL ISSUE BEFORE I CONCLUDE: I'VE HEARD THERE WILL BE ATTEMPTS TO ADD AUTHORIZATIONS FOR ADDITIONAL FACILITIES FOR THE FEDERAL CENTRAL VALLEY PROJECT TO THIS AGREEMENT. THIS MUST NOT HAPPEN. I KNOW THAT SACRAMENTO IS NOT WASHINGTON, BUT WE HAVE LEARNED THE "CHRISTMAS TREE" APPROACH TO SOLVING CALIFORNIA'S WATER PROBLEMS DOES NOT ALWAYS WORK. THE ADDITOIN OF OTHER ITEMS WOULD MAKE THIS AGREEMENT HOPELESSLY CONTROVERSIAL AND COULD PREVENT ITS TIMELY ADOPTION.

AGAIN, IT IS IMPERATIVE THE AGREEMENT BEFORE YOU TODAY IS RATIFIED BY CONGRESS AND SIGNED BY THE BUREAU OF RECLAMATION AND

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THE DEPARTMENT OF WATER RESOURCES. THE IMPLEMENTATION OF THE COORDINATED OPERTIONS AGREEMENT WOULD BE THE MOST SIGNIFICANT WATER POLICY ACCOMPLISHMENT IN CALIFORNIA IN THE PAST 10 YEARS. IT WOULD GUARANTEE MINIMUM FLOWS FOR THE DELTA, ESTABLISH FEDERAL RECOGNITION FO THE STATE'S WATER RIGHTS AND WATER QUALITY AUTHORITY OVER THE CENTRAL VALLEY PROJECT, AND PROVIDE A MUCH NEEDED INTERIM WATER SUPPLY TO THE STATE. THIS WATER COULD BE USED, NOT ONLY TO IMPROVE WTER QUALITY, BUT ALSO AS A SOURCE TO WATER FOR REGIONS THAT ARE CURRENTLY EXPERIENCING DEFICIENCIES.

ENSURING THE VIABILITY OF THE DELTA BENEFITS ALL CALIFORNIANS. THE DELTA DESERVES ATTENTION NOT ONLY TO PROTECT BENEFICIAL USES WITHIN THE REGION, BUT ALSO TO ENSURE THE EXPORT WATER NEEDS OF THE TWO PROJECTS. CALIFORNIA LAW DICTATES THAT DELTA WATER REQUIREMENTS FOR REASONABLE BENEFICIAL USES MUST BE MET BEFORE ANY WATER IS EXPORTED. CONVERSELY, THE TWO PROJECTS BOTH REQUIRE GOOD QUALITY WATER FOR EXPORT TO SATISFY THE CONTRACTUAL OBLIGATIONS OF EACH. FAILURE TO TAKE ACTION ON THE COORDIANTED OPERATIONS AGREEMENT WILL CONTRIBUTE TO FURTHER RISK AND DAMAGE TO THE PEOPLE OF CALIFORNIA AND TO THE BENEFICIAL USES OF THE DELTA.

THANK YOU.

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STATEMENT OF THE
CALIFORNIA DEPARTMENT OF WATER RESOURCES
BEFORE THE

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
SUBCOMMITTEE ON WATER AND POWER RESOURCES
HONORABLE GEORGE MILLER, CHAIRMAN

BY

DAVID N. KENNEDY
DIRECTOR
DEPARTMENT OF WATER RESOURCES

Mr. Chairman, members of the Committee, I would like to begin my testimony by thanking you for the interest you have shown in the Coordinated Operation Agreement and particularly for giving us the added impetus of this hearing to successfully conclude negotiations in Sacramento.

Before I get into the agreement itself, I believe a little history might be helpful. The Department of Water Resources and the Bureau of Reclamation have operated their respective projects pursuant to a coordinated operations agreement since the first unit of the State Water Project, the South Bay Aqueduct, became operational in 1962. The agreement that is currently in effect was signed May 16, 1960. That agreement was designed (1) to provide a method of allocating shortages in water supplies by prorating the shortage on the basis of specified annual diversion amounts; (2) to resolve the protest of

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Presented May 23, 1985, in Washington, D.C.

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each party to the applications of the other for water rights consistent with these annual diversion amounts and (3) to clear the way for construction of San Luis Reservoir and related facilities.

While the May 16, 1960 agreement provided the basis for coordinated operations, it recognized in Article 16 that further agreement on additional and more specific criteria would be needed for actually operating the two projects on a truly coordinated basis.

Negotiation of operating criteria started in 1961, and continued through May 13, 1971, when a draft agreement was completed. That draft agreement was never executed because of a stipulated judgment obtained in the lawsuit filed by the Environmental Defense Fund which prohibited approval of the agreement until an environmental impact statement had been prepared. However, the 1971 draft did provide an operating procedure for use by the operators of the CVP and SWP to determine proportionally how much water each project must supply from its reservoirs for uses in the Sacramento Valley, including the Delta,and how much water each project is entitled to export from the Delta. Through 1982, with the exception of 1976, the Department and Bureau operated the projects in a coordinated manner based on annual letters of agreement which essentially followed the terms of the 1971 agreement.

Experience in operating and developing both projects, particularly during the 76-77 drought, has shown that actual conditions are

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significantly different from what was assumed during the negotiations of the May 13, 1971, draft agreement. That agreement was negotiated using the November 19, 1965, Agreement on Delta Water Quality, which assumed a minimum outflow of about 1800 cfs from the Delta to San Francisco Bay. We now know higher minimum outflows are required. (Exhibit B of 1971 shows 2,911,000 acre feet per year for Delta area and outflow - Exhibit B-2 of 1985 shows 4,918,000 acre feet). In 1971, additional facilities were also assumed to be constructed such as a 2 million acre feet Auburn Reservoir, the Peripheral Canal and the Eastside Project of the CVP. Consequently, in 1979 negotiating teams of each agency were established to reevaluate the operating criteria, determine the proportionate water supplies available for each project, and develop a revised operations agreement.

The negotiators initially considered using a procedure based upon the priority of water rights as modified by the 1960 agreement. However, such a procedure was quickly discarded as impractical. Instead, an equitable sharing of water supplies available to the projects was accomplished by a negotiated step-by-step procedure. This procedure met most CVP requirements before utilizing assumed water supplies for the SWP. It was not a determination as to the priority of the water rights between the two projects, but merely a useful mechanism for carrying out practical operations studies. Dams and pumping plants of the Federal CVP were given the first opportunity to use the available water supply and also the first responsibility to meet in-basin needs and assure Delta water quality in compliance with standards (Exhibit A of the Agreement) extracted from the State Water Resources Control Board Decision 1485.

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The first study included operation of the existing CVP system, excluding the San Luis Unit, and included all instream prior rights and environmental requirements.

The second study added the SWP system and the federal San Luis Unit. The water supply available for this study was the excess Delta outflow from Study No. 1 and was shared 50/50 between the CVP and the SWP. This sharing was developed through negotiations.

The results of these two studies are shown in Exhibit B of the Coordinated Operation Agreement. These two studies were prepared at both the current level of development and at the assumed "full" level of development (year 2020).

The results of Study No. 2 for the current (1980) level of development were used to design a sharing formula. The resulting sharing formula provided for CVP/SWP proportionate split of 75/25 responsibility for meeting in-basin use from stored water releases and 55/45 for capture of excess flow. The formula was arrived at by reasoning, trial and error, and negotiation.

I would like to emphasize that the essence of the coordinated operations is the sharing formula, not the water supply figures in Exhibit B-1. The projects are <u>not</u> to be operated to meet predetermined yields but rather to first meet the needs in the areas of origin including the Delta water quality standards and flow

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requirements contained in Exhibit A; only then is water exported from the Delta. The COA does not affect the rights of third parties (Article 18).

After 25 formal negotiating sessions and innumerable meetings of subcommittees, agreement was once again reached by the negotiating teams in December 1982. Following changes in the management at the Department and Regional Office of the Bureau, negotiations were resumed in 1984 and eight formal sessions were held to address areas of concern, primarily in Articles 10 and 11. I will discuss these in some detail. All formal negotiating sessions were open and attended by representatives from various segments of the public. Agreement was reached by the negotiating teams at the May 6, 1985, meeting.

The basic points included in the agreement are:

1. Both parties agree to meet a specified set of water quality standards (Exhibit A) from State Water Resources Control Board Decision 1485. Article 11 also requires that Exhibit A shall be amended to include any new Delta standards that are not inconsistent with Congressional directives. However, if the Secretary of the Interior determines that new standards are inconsistent with Congressional directives, the Secretary is promptly to request the Department of Justice to bring an action to

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determine the applicability of the new Delta standards to the United States.

This has been the most difficult area of the agreement. During the long negotiations we have come to realize that there is no other way to deal with possible changes in the water quality standards than to leave it up to the courts under existing law. In 1978 the U. S. Supreme Court ruled in California v. U.S. that the State Water Resources Control Board may impose conditions on the Central Valley Project that are not inconsistent with Congressional directives respecting the project. We have therefore constructed the agreement to be neutral on this legal issue. The disclaimer paragraph in Article 11(d) is designed to assure this neutrality.

The standards do not presently include permanent Suisun Marsh criteria, but the Coordinated Operations Agreement does contain a methodology (Articles 11 and 14) for incorporation of the Suisun Marsh protection features when current negotiations are completed. The Department has constructed, with financial assistance from the Bureau, the first stage facilities to meet Suisun Marsh water quality needs. The extent and timing of additional necessary facilities are subject to on-going negotiations between the Department, Bureau of Reclamation, California Department of Fish and Game and the Suisun Marsh Conservation District. The parties are nearing agreement. Congressional authorization and funding will be necessary for Federal participation. The State Water Resources

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Control Board will be requested to modify the Suisun Marsh standards in accordance with such agreement.

2. Each project's annual supplies at the 1980 level of development have been established, 6.9 million acre feet (MAF) for the CVP and 3.6 MAF for the SWP (includes 1.0 MAF for Feather River service area). Annual supplies at the 2020 level of development would be 8.4 MAF for the CVP and 3.1 MAF for the SWP (includes 1.0 MAF for the Feather River service area). The determination of these supplies was computed as described earlier.

3. The agreement provides for each party's use of the other's facilities for both short and long-term situations. In accordance with the requirements of State Water Resources Control Board Decision 1485, it provides for conveyance of Central Valley Project water through the California Aqueduct to San Luis Reservoir to make up for the curtailment of pumping during the striped bass spawning period.

Section 10(h) calls for a contract to be concluded by December 31, 1988, for the purchase of interim CVP water by the SWP and the conveyance of CVP water to federal contractors through the State Aqueduct. The Central Valley Project will have priority equal to that of the State Water Contractors for use of the State Aqueduct for an amount of water equal to the amount purchased by the State from the CVP. In addition, we are committed to providing conveyance

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service to the CVP for additional CVP water so long as such conveyance does not diminish deliveries or increase costs of water supplies to the State Water Project contractors. If we fail to reach agreement on such a purchase and conveyance agreement, then this coordinated operating agreement may be terminated by either party. (Article 14(b))

Finally the agreement calls for periodic review to determine the success of each party toward meeting its objectives and to make adjustment if necessary to enable the party to develop its respective water supplies. (Article 14)

The Agreement fairly protects the interests of both projects while meeting responsibilities to protect the water-related environment. We strongly urge prompt action by the Congress to allow execution of the Agreement as soon as possible after completion of environmental documentation this fall.

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STATEMENT OF
DAVID G. HOUSTON
REGIONAL DIRECTOR, SACRAMENTO, CALIFORNIA

REPRESENTING THE
BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR,
BEFORE THE HOUSE SUBCOMMITTEE ON WATER AND POWER RESOURCES OF THE
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
ON THE
STATE/FEDERAL COORDINATED OPERATION AGREEMENT
FOR THE
CALIFORNIA WATER PROJECT AND FEDERAL CENTRAL VALLEY PROJECT

May 23, 1985

We appreciate the opportunity to be here today to present the views of the Department of the Interior regarding the Coordinated Operation Agreement. The Coordinated Operation Agreement provides an operating relationship between the two largest water projects in the State of California. Under the Agreement, the operation would be coordinated in such a way that water quality standards established by the State Water Resources Control Board in Decision 1485 for the Sacramento-San Joaquin Delta will be achieved while at the same time meeting the goals and objectives of both the Central Valley Project and the State Water Project. The proposed agreement provides a basis for building consensus around water development issues in the State of California. The formulae established in the agreement provide for an equitable sharing and recognize water development strategies adopted by both the State and Federal projects.

The long history of water development in the Sacramento-San Joaquin Delta is surrounded by many complex and difficult questions. The water rights in the respective basins (Sacramento and San Joaquin) have never been fully adjudicated. Many permits or rights were secured by the various parties in a period of time when there was no Water Resources Control Board in the

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State of California and subsequently when water rights were administered by the State Water Rights Board. All of the water rights for the State Water Project and most of the water rights for the Federal Central Valley Project, however, are now regulated by the Water Resources Control Board in accordance with State law.

The Coordinated Operation Agreement recognizes, through the methodologies and assumptions used in its development, the long-endorsed principle of Western water law or, "first in time—first in right." In the case of the Coordinated Operation Agreement, each project develops its water supply in priority from the date it was actually constructed. As a consequence, the two projects have been able to agree to their respective water supplies without actually having to litigate the water rights issue.

The Coordinated Operation Agreement also provides for integration of the two projects contractually to maximize the resources of both projects for the benefits of the State of California and the Nation.

The Coordinated Operation Agreement provides an institutional framework whereby both projects can operate conjunctively in such a way that the State, if it purchases water on an interim basis from the Federal Central Valley Project, can help repay the Federal investment in project works. At the same time, by utilizing surplus conveyance capacity in the State aqueduct, Federal contractors can similarly assist in repaying the capital

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costs of the California Aqueduct. Making better use of existing facilities is in both the State and the national interest.

Attached to this statement is a summary which explains in further detail the Agreement and history of the State Water Project and the Central Valley Project.

In summary, the Coordinated Operation Agreement does a number of things: It enables the projects to conserve water resources; it enables reduction of groundwater overdraft; it fosters protection of environmental values of the Delta, the Bay and the other waters of the State of California. It has an additional advantage of providing more time for future planning to be certain that the future development in the State of California can be done in an economically efficient and environmentally sensitive way.

We believe the Coordinated Operation Agreement is a major step in securing predictability, environmental protection, and economic stability within California and would encourage its ratification by the Congress.

We appreciate the opportunity to be here before you today and look forward to answering any questions you may have.

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QUESTIONS FOR DAVID G. HOUSTON

COORDINATED OPERATION AGREEMENT

Water Quality

1. Does the agreement as presently drafted provide sufficient assurances that Delta water quality will be protected, at least to the D-1485 level, during a drought year?

Response:

Yes, subarticle 11(a) states, "The Central Valley Project and the State Water Project will be operated in conformity with the Delta standards in Exhibit A." The Delta standards in Exhibit A were extracted from the State Water Resources Control Board Decision 1485.

The sharing formulae contained in Article 6 were structured around the need to meet all uses of water of the Sacramento Valley and the Delta. These uses include the water required to meet the Delta outflow and water quality requirements specified by Exhibit A.

The Exhibit A Delta outflow and water quality requirements vary according to year types classified as "wet, above normal, below normal, dry and critical," and according to time of year within year types. In most years there is adequate water available in the system to meet the needs of all beneficial uses. In critical years, however, the system is deficient and all uses must share a less than adequate supply. The Delta outflow and water quality requirements established in Exhibit A recognize this fact and the requirements in critical years are less stringent than the requirements in wetter years. During these critical or drought years, both Federal and State contractors will receive deficient supplies; however, the Exhibit A requirement, as specified for drought years, will be fully met.

2. Please explain the relationship between the Tracy pumping standards and the water quality standards the CVP will have to maintain under the COA.

Response:

Tracy water quality standards set salinity levels at the CVP Tracy Pumping Plant at 450 p/m TDS for water that is pumped down the Delta-Mendota Canal. The State Water Resources Control Board Decision 1485 set water quality and flow standards at 18 points throughout the Sacramento-San Joaquin Delta for municipal, industrial, agricultural, and fish and wildlife concerns. The net impact of these standards, as adopted in Exhibit A, over the Tracy standards is that the projects are required to provide more outflow to maintain the Exhibit A standards.

3. How much water will be required from the CVP to ensure that D-1485 standards will be met?

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Response:

The amount of Delta outflow required to maintain the standards contained in Exhibit A varies from about 3.2 MAF in some critical years to over 5.5 MAF in the wettest years. In most years the Delta outflow and water quality requirements contained in Exhibit A are easily met by the combined operations of the CVP and the SWP with no significant effect on the projects' accomplishments. However, during drought periods, such as the sustained critical period of 1928-34 or the shorter but more severe 1976-77 period, when water resources are limited, releases of stored water from CVP and SWP reservoirs are necessary to maintain Exhibit A standards.

Studies by Bureau engineers indicate that the maintenance of Exhibit A standards during the critical 1928-34 period would require an average annual Delta outflow of about 3.4 MAF. Even during this critical period much of this required outflow would occur when the natural flow of the system exceeded the Sacramento Valley inbasin needs. During these circumstances the water supply available in excess of inbasin needs would be shared--55 percent for the CVP and 45 percent for the SWP. When natural flow is inadequate to meet Sacramento inbasin uses, the projects release stored water to meet those inbasin uses with 75 percent coming from the CVP and 25 percent coming from the SWP.

It has been estimated that during the critical 1928-34 period, meeting Exhibit A standards requires about 800,000 acre-feet a year more than meeting the Tracy water quality standards over the same period. About 575,000 acre-feet of this increase occurs at a time when releases from storage are required by the projects to meet the Exhibit A requirements.

While the United States has committed the CVP to meet 75 percent of this increase over water required to maintain Tracy water quality standards, other provisions of the current COA have been changed from those contained in the 1971 draft COA, so that the net effect on CVP yield is a small increase. (See answer to question #8.)

4. Does the 75%-25% sharing formula mean that the CVP is responsible for supplying 75% of flows needed to meet Sacramento Valley inbasin uses (including Delta water quality standards) during a drought? If so, why does the CVP have three times as much responsibility to supply water needed to meet Delta water quality standards?

Response:

The operations of both the CVP and SWP affect prior water rights holders in the Sacramento Valley and the Delta: During late spring, summer, and early fall months of most years, storage withdrawals from project reservoirs are necessary to provide for these prior right holders. The CVP operations affect approximately 3 million-acre-feet of use along the Sacramento River while the SWP operations affect about 1 million-acre-feet of use along the

Feather River or about a 75%-25% ratio. According to the terms of the COA, the CVP is responsible for 75% of inbasin uses (including Delta outflow) when such uses require storage withdrawals.

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It should be stressed that the CVP (75%) - SWP (25%) sharing is during times of storage withdrawal. While ultimately the CVP and SWP plan to export approximately the same amount of water from the Delta, the SWP develops the majority (about 75 percent) of its export yield from winter and early spring Delta surpluses.

5. Given the amount of water already under long-term contract with the CVP, what assurances are there that sufficient supplies will remain available to meet D-1485 in the event of a drought?

Response:

The operation studies that support the COA are detailed in a technical report entitled, "Determination of Annual Water Supplies for Central Valley Project and State Water Project," dated March 1984 (copy attached). The report, prepared jointly by Bureau and State staff, outlines all operating assumptions.

Two assumptions of primary importance are:

1. The occurrence of a drought no more severe than the sustained historical drought from 1928 through 1934, and

2. Exhibit A criteria would be met in all years of that drought.

The annual water supplies for both projects were determined for two levels of development--year 1980 level or present, and year 2020 level or ultimate. These supplies are summarized in Exhibit B-1 and Exhibit B-2, respectively, in the COA.

The ultimate development level of annual water supply for the CVP includes not only maximum deliveries to long-term CVP contractors but an additional 1 million-acre-feet of delivery to potential CVP contractors. Assuming this level of development, the Exhibit A criteria would still be met in all years.

Another key assumption in the determination of the annual water supplies to both projects is that contractors could tolerate a deficiency in supply of up to 100 percent of 1 year's supply during this sustained drought. The CVP would impose deficiencies of 25 percent per year for the 4 critical years in the drought while the SWP would impose deficiencies of 25 percent for 2 years and 50 percent for 1 year. (See page 6 of the technical report.)

If a drought were to occur that was more severe than the 1928 through 1934 period, such as the short 1976-77 drought, greater single-year deficiencies may have to be imposed. All CVP irrigation contracts and many of the M&I contracts have provisions which allow the imposition of deficiencies during critical years.

Water Supply

6. As a result of this agreement, are there any explicit or implicit understandings or commitments to construct additional storage facilities

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such as: Auburn Dam, the Peripheral Canal, Cottonwood, High Shasta, or Los Banos Grande?

Response:

No, the scope of the COA is limited to the water supplies that can be developed and delivered by the existing CVP and SWP facilities listed in Article 5 of the agreement. If, however, new facilities should be constructed in the future the COA provides the flexibility in Article 14 to include such facilities in the agreement by modifying the sharing formula contained in Article 6.

7. Were any assumptions regarding additional water storage made?

Response:

No assumptions regarding additional water storage were made in the COA or in any studies supporting the COA.

8. What is the current yield of the CVP?

Response:

The current yield of all the units of the CVP is 9.4 MAF. However, several of the units such as Black Butte, Sly Park, New Melones, Hidden, Buchanan, and Friant were designed to serve local areas. The yield of these units is generally not included when discussing the yield of those facilities which are operationally integrated for the development of export supplies and the maintenance of water quality standards in the Delta.

The estimated yield of the operationally integrated facilities (Trinity, Shasta, Folsom, and Federal San Luis Dams and the associated conveyance facilities) is 8.25 MAF. Exhibit B-2 of the Agreement shows that, under projected ultimate conditions, 4.51 MAF will be used in the Sacramento basin and 3.74 MAF will be exported to the San Joaquin basin.

In 1969, a joint study by the Bureau and DWR was prepared as support of a 1971 draft COA. In that study, the yield of the CVP was calculated to be 9.25 MAF. This study, however, assumed the existence of Auburn Dam, Peripheral Canal, and a pumping capability of 10,300 cfs at the State's Harvey O. Banks Pumping Plant. The study also assumed that Tracy water quality standards could be met with a Delta outflow of 1,800 cfs. In addition, the procedure for sharing available water supplies and responsibility to maintain Sacramento Valley inbasin use by the two projects was significantly different from that of the current draft COA.

Data gathered during the 1976-77 drought demonstrated that more than 1,800 cfs was required to maintain Tracy water quality standards. In addition, by 1978 the Peripheral Canal, Auburn Dam, and the 10,300 cfs Delta pumping capability assumed in the 1969 joint studies had not been constructed and it appeared such facilities might not be constructed in the immediate future. For these reasons the yield of the CVP was recalculated in a study using

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existing CVP and SWP facilities and a more realistic estimate of the outflow required to meet Tracy water quality standards. This 1978 study demonstrated the CVP capability of delivering a yield of 8.1 MAF when operating under the sharing provisions of the 1971 draft COA and meeting Tracy water quality standards.

Early in 1979 it became apparent that the 1971 draft COA should be renegotiated to allow the State and Federal projects to:

1. Share available water supplies.
2. Establish mutually recognized yields.
3. Share responsibilities to maintain Sacramento Valley inbasin uses.

Studies were made which incorporated these three goals and a quasi-water rights approach described in the "Technical Report on Determination of Annual Water Supplies for Central Valley Project and State Water Project," dated March 1984. These studies are the basis for Exhibits B-1 and B-2, and the sharing formulae contained in Article 6.

9. Please describe the importance of determining the annual water supplies for each project.

Response:

The COA studies were performed for two levels of development--year 1980 and year 2020. The year 1980-level studies were done to: (1) develop the operating procedures and sharing formulae contained in Article 6; (2) provide an estimate of the incremental CVP annual water supplies available in excess of the 1980-level demands; and (3) determine the extent to which the SWP can currently satisfy its water contractors' demands.

The year 2020-level studies were done to: (1) provide an estimate of long-term annual water supplies attainable by each project using existing facilities; and (2) provide data for developing long-term operating criteria for both projects, assuming no new construction while continuing to meet Exhibit A standards.

Determination of the annual water supplies was a paramount concern, but had different connotations for the Bureau and the State. The Bureau has an ultimate annual CVP water supply that exceeds current contracts and other allocations such as navigation and fishery flow maintenance. As the projected ultimate demand for CVP water exceeds the water available, it is important to know the extent to which CVP water resources can be committed beyond its present uses.

Conversely, the State has an overcommitted project. Present-level annual water supplies from the SWP are sufficient to satisfy the current and estimated near-term uses of its existing contractors. However, it has been estimated that shortly after 1990 new facilities will be required to meet the buildup on existing SWP contracts. It is important from the standpoint of the State to know both the present level and ultimate level annual water

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supplies available from the SWP to identify both the timing and, ultimately, the magnitude of new facilities required to fully satisfy its contractual commitments.

The determination of the annual water supplies for each project also can have a significant effect on the financial position of the Central Valley Project (CVP). This effect is reflected in an improved basis for the allocation of project costs and the forecasting of water sales revenues for existing and future contracts. A firm estimate of the project water supply provides a firm basis on which to allocate costs to the authorized project purposes, calculate cost of service rates, and forecast the repayment of reimbursable costs by project beneficiaries.

Reauthorization

10. Does the Administration support enactment of legislation to specifically authorize the use of CVP water for protecting Delta water quality? If so, what form should that legislation take?

Response:

The COA is designed to be a completely self-contained document; all actions required now or in the future can be accommodated under the provisions of the agreement. Exhibit A already incorporates water quality standards which will be met by the CVP (and the SWP). Consequently, all that is necessary is legislation which simply authorizes the execution and implementation of the COA by the Secretary.

11. The 1937 CVP authorization declares that its facilities "shall be used first for river regulation, navigation and flood control; second for irrigation and domestic uses; and third for power." If water quality is to be a project purpose, where should it be placed in this list of priorities?

Response:

The 75-25 sharing formula in Article 6 of the COA provides for Exhibit A water quality standards to be met at the same time that other Sacramento Valley inbasin uses are being satisfied by the Federal and State projects. Export uses are met after Sacramento Valley inbasin uses in accordance with the 55-45 formula in Article 6. The COA would have the net effect of placing Delta water quality standards as one of the highest priorities on the system; to be met before exports under the Article 6 formulae.

12. If the CVP authorization is amended to make water quality a project purpose, does this mean that we are initiating a new 50-year repayment period?

Response:

No. In the past the CVP has been operated under a "rolling repayment" policy which established a new 50-year repayment period for all irrigation costs

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each time new facilities were added to the CVP. Thus, an additional CVP authorization would not require, even under historic policy, the initiation of a new 50-year repayment period.

13. What is the life of this agreement? What assurances can you give that the agreement will not be terminated just five years after it is executed?

Response:

The COA was designed to bind both the State and Federal projects to coordinated operation in perpetuity. Flexibility to amend the agreement, where necessitated by changed circumstances, such as the construction of additional facilities, was built into Article 14. This flexibility was provided for the specific purpose of maintaining agreement even when inevitable changes occur in the water supply and operations picture.

The possibility of termination of the COA within five years arises in the context of subarticles 10(h) and 14(b). Both the CVP and the SWP have demands which will go unmet for some time unless the Bureau and DWR reach agreement on purchase and conveyance of CVP water pursuant to subarticle 10(h). (Additionally, the permits required to implement such an agreement must be acquired.) These project demands are important enough to each agency to ensure that our best, good faith efforts will be applied to negotiating an agreement under subarticle 10(h), rather than terminating the COA for failure to reach such an agreement. Moreover, the termination provision in subarticle 14(b) is optional, not mandatory. Thus, even if the agencies fail to reach agreement on the contract provided for in subarticle 10(h), they may have crucial policy concerns which will make it more expedient to continue coordinated operation rather than terminate the COA.

Article 14 provides for review of project operations every five years, or more frequently if requested by either party. The Bureau and the State have spent at least 25 years conducting joint operation studies and negotiating an agreement to provide for coordinated operations because it is to their mutual advantage to have such an agreement. Subarticle 14(b) provides for an Advisory Board to assist in areas of extreme disagreement on changes to the COA precisely because we want to maintain the agreement we have finally managed to negotiate. Given the history of these efforts, it is highly unlikely that either party would carually seek to terminate the COA after five years time.

14a. What is the relationship between this agreement and the water rights granted by the State for each project?

Response:

The CVP and the SWP both operate under multiple water rights. These rights have various priorities, the earliest being 1927. Generally the rights of the CVP are senior in priority to the rights of the SWP. It would be a practical impossibility to perform a strict water rights analysis of the complex intermingled system that includes the CVP, the SWP and other right holders on the rivers and streams tributary to the Delta. Therefore, to

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resolve the coordination of operating the two projects with differing water rights priorities, and to resolve the objections of DWR to the issuance of permits to the Bureau for the CVP, the Bureau and DWR entered into the May 16, 1960 agreement. This agreement provided in part for the future "exchange of any and all plans, criteria, and other operational information relative to the operation of their projects," and for further agreement to "establish by agreement mutually acceptable operational criteria and plans including water service that will produce the maximum accomplishment of the Federal Central Valley and State Feather River and Delta Diversion Project."

The present COA further addresses the concerns leading to and expressed in the May 16, 1960 agreement. In place of a strict water rights analysis a simplified step-by-step procedure was developed during the negotiations. It can be described generally as a "first-in-time" process wherein the first units constructed have first opportunity to use the available water supply. It should be noted that the use of this process to expedite the generation of operation studies did not represent a concession by either agency regarding the seniority of their respective water rights. This process is described in detail on page one of the attached "Technical Report on Determination of Annual Water Supplies for Central Valley Project and State Water Project," March 1984.

14b. Will new water rights have to be granted?

Response:

No new water rights are necessary for implementation of the COA. If additions are made to either project, however, new water rights will be required, and the COA will have to be amended to accommodate these changes.

The sale of CVP water to the SWP and the use of SWP facilities to deliver water for the CVP will require that the SWP Banks Pumping Plant be added as a point of diversion under CVP water rights permits.

Contracting Issues

15. If water is made available by the CVP to meet Delta water quality standards, should it be done on a non-reimbursable basis? Who would pay if it was done on a reimbursable basis?

Response:

Under existing law, water made available by the Central Valley Project to meet Delta water quality standards should be furnished as a reimbursable responsiblity of the project to the extent that the Delta standards are established to mitigate project caused impacts or impacts caused by others.

This question is particularly difficult to answer since identification of beneficiaries and quantification of benefits is such a subjective matter. Meeting the Exhibit A standards will unavoidably result in enhancement in

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some areas while attempting to mitigate impacts in others. Traditionally, enhancement has been generally nonreimbursable and mitigation reimbursable. To the extent that specific benefits and beneficiaries can be identified, costs should be assigned and recovered accordingly.

16. If the agreement is approved by Congress, does the responsibility for meeting Delta water quality standards fall on future CVP contractors only, or does it fall on all existing and future contractors?

Response:

The responsibility for meeting Delta water quality standards is a project-wide responsibility to be borne by all water service contractors. Some contracts, principally those with Sacramento River water rights holders and the Mendota Pool exchange contractors, preclude imposition of shortages except under very specific inflow conditions at Shasta Reservoir. There is no direct relationship between Delta outflow for water quality purposes and the inflow to Shasta Reservoir. Thus, we would be unable to impose a proportionate share of the responsibility on these contractors during the term of their contracts. We do not anticipate imposing a greater share of the burden on future contractors.

17. Will any existing contracts have to be renegotiated as a result of this agreement?

Response:

We do not anticipate the need for renegotiation of any existing contracts as a result of execution of this agreement.

18. If such renegotiations take place, will the new contracts have to comply with the provisions of the Reclamation Reform Act?

Response:

Not applicable in light of answer to question No. 17.

19. The COA provides for a process whereby a contract will be executed for the sale of water from the Federal CVP to the SWP (Article 10(h)). However, there is no process established for the sale of State Project water to the Federal CVP. Shouldn't there be such a provision?

Response:

Under current circumstances, and for the foreseeable future, the SWP has inadequate supplies available to it to meet its existing contractural obligations. If these circumstances should change in the future, it will be to our mutual advantage to enter into an agreement for purchase of SWP water by the CVP since anticipated demands for CVP water currently exceed

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available supplies at the year 2020 level of development. The SWP is unlikely to have such water available for sale unless it constructs additional facilities. Should this construction occur, the COA will have to be amended. If appropriate at that time, a provision can be added for sale of SWP water to the CVP.

20. In the description of the contract for the sale of CVP water to the State, Article 10(h) states: "The terms and conditions of said contract shall be no less favorable to either party than the terms and conditions either party would make available to their respective long-term contractors ...." Does this mean CVP water will be sold to the State at the same subsidized price that Federal long-term contractors pay?

Response:

The price to be charged for water sold to the SWP depends on the actual use of the water and federal services provided. Existing federal law provides the guidelines for cost recovery. The price of water will be one of the subjects of the negotiations with the SWP, along with the quantity of water to be sold, the amount and cost of conveyance capacity made available to transport CVP water and a number of other items. Studies have been initiated to determine the quantity of CVP water available for sale and the ability of the Department of Water Resources to divert the water from the Delta. The State and the Bureau will jointly review and identify the capabilities and constraints of both projects which may apply to the anticipated contracts. At this time, the only conditions or constraints that have been identified are that the water is subject to applicable Federal law and subject to withdrawal by the United States, upon reasonable notice, for use by Federal contractors.

21. How much water will the Federal government be selling to the State of California under this agreement? Under what conditions or constraints will the sales take place?

Response:

Studies have been initiated to determine the quantity of CVP water available for sale, the ability of the Department of Water Resources to divert the water from the Delta, and the uses (e.g., agriculture or municipal) for the supply. The Bureau and the State will jointly review and identify for both projects the capabilities and the constraints which may apply to the anticipated contract. At this time, the only conditions or constraints that have been identified are that the water is subject to applicable Federal law and subject to withdrawal by the United States, upon reasonable notice, for use by Federal contractors.

22. Does the Reclamation Reform Act apply to the contracts signed with the State for the purchase of water under this agreement?

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Response:

The applicability of Reclamation Reform Act to water marketed under contracts signed with the State for the purchase of CVP water is an issue currently under study.

23. What is the current status of the Federal water marketing moratorium? What is the relationship between this agreement and plans to lift the moratorium?

Response:

What has become popularly known as the "Federal contract moratorium" resulted from a Secretarial decision in 1978 to temporarily suspend further water service contracting until the issue of applicability of Exhibit A standards to the CVP was resolved. The COA resolves this issue. The Bureau's objectives have been: (1) to negotiate a State-Federal agreement (COA) whereby the CVP and SWP are operated in coordinated fashion to meet specified water quality standards and still achieve the Congressionally authorized purposes of the CVP; (2) to secure Congressional authorization to execute and implement the COA; and (3) to implement a full scale CVP water marketing program which allows distribution of available water supplies as contemplated by studies which support the COA. (See answer to question No. 25 for additional information).

24. Does this agreement explicitly or implicity make any commitment or convey any understanding as to how and to whom water made available as a result of the COA will be placed under contract?

Response:

This agreement does not explicitly or implicity make any commitment or convey any understanding as to how or to whom water made available as a result of the COA will be placed under contract, with the exception of the sale of water on an interim basis to the State of California.

25. What criteria will be used to market water made available as a result of this agreement?

Response:

Specific criteria must still be developed to allocate currently uncontracted water supplies within the CVP. There are several efforts currently underway which are a prerequisite to resumption of the CVP contracting program. For example, we have entered into contracts with several consultants to begin preparation of the necessary environmental documentation. We are also preparing a petition to the State Water Resources Control Board for consolidation and expansion of the place of use of our water rights permits and to obtain an alternative point of diversion at the State Harvey O. Banks Pumping

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Plant. In addition, the Bureau is in the process of developing a comprehensive water ratesetting policy to ensure recovery of the reimbursable costs of the Central Valley Project. In response to questions from potential CVP water contractors concerning priorities, we have been advising that we intend to complete the marketing programs in currently authorized service areas and provide additional water to those contractors with financial obligations to the United States who are the subject of changing conditions. Any water remaining will be allocated to additional potential water contractors on the basis of availability of conveyance facilities and need.

26. If the CVP is reauthorized to make Delta water quality protection a project purpose, what impact will this have on contracts which were in effect prior to the enactment of the new legislation? Will the legislation have to be retroactive in order to gain access to water already under long-term contracts?

Response:

Meeting Delta standards in Exhibit A would have no impact on water supplies available to CVP customers under existing, long-term contracts. Hypothetically, if the future standards require the use of all available water supplies, it will create a situation where we cannot meet our CVP contracts and, consequently, reimbursable project costs will not be repaid.

27. Article 10 of the agreement outlines how conveyances and exchanges of water will take place. Assuming the CVP "wheels" water through the SWP, Article 10(c)(2) estimates the cost to be $8.44 per acre-foot. How will this cost be passed on to Federal contractors? Will amendments to existing contracts be required? If so, will these amended contracts have to be consistent with the Reclamation Reform Act?

Response:

The cost of wheeling water through SWP facilities under the circumstances described in subarticle 10(c)(2) will be treated as a CVP cost and recovered through the CVP water rates. It will not be necessary to amend existing contracts to accommodate this increased cost.

28. Do the water supplies needed to implement the COA (Article 10(h)(1)) take precedence over the more than 4 million acre-feet in water contract requests now pending for the CVP?

Response:

The water supplies needed to implement subarticle 10(h)(1) are supplies currently not needed by CVP water users. These supplies are to be marketed to the State on an interim basis subject to recall as explained in subarticle 10(h)(2). The State will, however, receive equal treatment during periods of shortage at any time prior to recall of the water with appropriate notice. The matter of appropriate notice will be a subject of discussion during negotiations with the SWP.

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Article 11

29. Please explain the factors and circumstances that led to the resolution of the issues raised in Article 11.

Response:

The Bureau had two main objectives in reaching agreement on Article 11: First, to meet Exhibit A standards and to ensure that a future change in water quality standards can be accommodated in the COA through amendment of Exhibit A. In this way the perpetual nature of the agreement can be maintained. Secondly, to implement the U. S. Supreme Court's decision that the CVP is to be operated to meet State water quality standards that are not inconsistent with Congressional directives.

The existing Article 11 resulted from a realization on the part of both the Bureau and the State that more specific provisions regarding the applicability to the CVP of water quality standards other than those in Exhibit A could not be incorporated without an ability to foretell the scope and details of future actions by the State Water Resources Control Board. Accordingly, Article 11 requires the Bureau to evaluate impacts of any new State standards through additional operation studies and determine whether those new standards are consistent or inconsistent with Congressional authorization of the CVP.

30. Do you believe Article 11 will insure that the Federal government will do its share to meet Delta water quality standards now and in the future?

Response:

Yes, Article 11 commits the Federal government to meet such standards which are not inconsistent with Congressional authorization of the CVP.

31. Article 11(b) states that the United States will request the Department of Justice to bring an action to determine the applicability of new Delta water quality standards to the CVP. While this action is under litigation, under what standards/criteria will the projects be operated?

Response:

We presume the SWP will be operated in conformance with the new standards. Absent a court order or Congressional directive to the contrary, the CVP will be operated in conformance with Exhibit A as it then exists.

32. How long might it take to resolve the matter in the courts?

Response:

We cannot estimate how long any such litigation would take to complete. Hopefully, such litigation will never be necessary.

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33. Please explain the meaning of Article 11(c).

Response:

Subarticle 11(c) simply makes it clear that the Department of the Interior is not prohibited from seeking the enactment of legislation regarding operation of the CVP to override case law on the subject. If such legislation is enacted, it will govern CVP operations.

34. If there were a recurrence of the 1977-1978 drought with the COA in place, how would the projects be operated differently to protect Delta water quality? What would be different about the projects' responses to the drought with the COA in place?

Response:

The most severe drought in the history of the Central Valley and State Water Projects occurred during the two-year period spanning water years 1976 and 1977. Hydrologists estimate this event to be a 1 in 200 occurrence event. That is, the inflow to the SWP/CVP reservoirs over all possible two year periods would exceed the amount received in 1976-77 99.5 percent of the time. Such rare conditions will require that emergency actions be initiated by all parties managing the limited water resource.

The COA provides a common set of standards for Delta water quality in Exhibit A. This was not the case in 1976-77 as the State and Bureau were operating to meet their own standards. In addition, Article 6 of the COA assigns specific obligations to both the SWP and CVP for operating to maintain Exhibit A water quality standards. Having these common standards and assigned obligations will promote and support the high level of cooperation necessary to efficiently manage the combined SWP/CVP resources during drought conditions.

35. Please describe experiences that took place during the drought of 1977-1978.

Response:

These experiences are documented in numerous publications. Attached are two reports describing the conditions and actions taken during the 1976-77 drought, entitled, "CVP Water Operation in 1976 - A Dry Year", and "CVP Water Operations in 1977 - The Second Dry Year".

As a result of low reservoir storage levels and record low reservoir inflows, among other CVP impacts, deficiencies were imposed on CVP water contractors, navigation requirements were not met, power commitments were not satisfied, and reservoir recreation at Shasta and Folsom was only 20 percent of normal.

Many actions were taken under the Emergency Drought Act of 1977, in coordination with the State, to optimize the use of the limited water supply in such areas as Delta water quality, power generation, recreation and fish and wildlife resources.

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36. Which project had to assume major responsiblity for Delta water quality protection during this drought?

Response:

Since the SWP was operated in 1976-77 to meet higher Delta outflow standards than those met by the CVP, the SWP carried a heavier burden to support Delta outflow with the SWP water supply. The Bureau, however, did release water significantly in excess of what it was otherwise obligated to do under the Tracy standards in 1976. These releases were a significant factor in meeting the Delta standards at that time. Having a common set of standards and responsibilities as provided in COA will resolve this situation.

37. How will any agreement reached on the Suisun Marsh be integrated with the COA?

Response:

Integrative language is being considered in the agreement for the Suisun Marsh that is presently being negotiated between the Bureau of Reclamation, California Departments of Water Resources and Fish and Game, and the Suisun Resource Conservation District. The language will provide for incorporation of the water quality standards of the Suisun Marsh agreement into the COA.

38. What is the present status of negotiations to determine how best to achieve water quality standards in the Suisun Marsh?

Response:

Negotiations on an agreement between the Bureau of Reclamation, California Departments of Water Resources and Fish and Game, and the Suisun Resource Conservation District are nearing completion. There are only a few items of negotiation that remain to be settled.

39. Will facilities need to be constructed in order to insure protection of water quality in the Suisun Marsh?

Response:

Yes, facilities will need to be constructed to ensure protection of water quality in the Suisun Marsh. The agreement being negotiated for protection of the Suisun March requires the staging of construction of a number of new facilities in the Marsh. The agreement requires a trial period to test each new facility as it is constructed. During the trial period the new facility will be tested for its effectiveness. If tests of that facility demonstrate that water quality standards can be met without any additional construction, then no more facilities will be built.

40. Will a Suisun Marsh agreement also require reauthorization of the CVP and/or authorization by Congress?

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Response:

It is anticipated that legislation will be needed to authorize the Secretary to financially participate in construction of facilities contemplated by the four-party agreement currently being negotiated.

Fish and Wildlife

41. Has the Fish and Wildlife Service been an active participant in the COA negotiations?

Response:

All COA negotiations have been open to the general public and opportunities were provided during each meeting for public comment. The Fish and Wildlife Service was not a member of the Federal negotiating team, which consisted of Bureau and Solicitor's Office employees. The Service was consulted during the negotiations, however, regarding certain issues. (See answer to question No. 45.)

42. You state in your testimony that the COA "fosters protection of environmental values of the Delta, the Bay, and other waters of the State of California". Please describe the goals of the CVP for fish and wildlife.

Response:

The CVP provides for facilities to mitigate damage to and enhance fish and wildlife resources in accordance with the various statutes authorizing the various units and divisions of the CVP, including the Act of August 27, 1954, Ch. 1012, 68 Stat. 879, and the Fish and Wildlife Coordination Act of March 10, 1934, as amended by the Act of August 12, 1958, 72 Stat. 563.

43. Is it the intent of the COA to provide protection to San Francisco Bay as well as to the Delta?

Response:

The COA provides for protection of water quality in the Delta as set forth in Exhibit A. If the SWRCB establishes standards for protection of the San Francisco Bay, Exhibit A can be amended to accommodate such standards, if they satisfy the criteria specified in Article 11.

44. To some degree, the D-1485 standards were promulgated to protect fish and wildlife resources in the Delta. Are there other fish and wildlife resources in California which would benefit from additional CVP water supplies? Will implementation of the COA, in effect, "use up" CVP water which might have someday been dedicated to other fish and wildlife resources?

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Response:

Implementation of the COA will allow the Bureau and the State to coordinate the operation of the CVP and the SWP in a manner that allows more efficient use of water supplies and facilities of both projects. The CVP water supplies identified in the COA will be used to meet the multiple purposes of the CVP to the maximum practicable extent. Demands for CVP water currently exceed available supplies. The COA does not create water for the CVP or allocate CVP water to any particular use or uses.

45. Please describe the Department's schedule for compliance with NEPA, the Endangered Species Act, and the Fish and Wildlife Coordination Act with regard to implementation of the COA.

Response:

On January 4, 1984, the Bureau received from the U.S. Fish and Wildlife Service and the California State Department of Fish and Game draft fish and wildlife evaluations related to implementation of the COA. This evaluation addresses fish and wildlife resources of the Trinity, Sacramento, Feather and American Rivers, reservoirs, Sacramento Valley basins and bypasses, joint CVP/DWR facilities, and Delta and San Francisco Bay wildlife. A final Fish and Wildlife Coordination Act report is scheduled to be received from the Fish and Wildlife Service in June 1985.

On March 20, 1984, the Bureau received from the U.S. Fish and Wildlife Service, Sacramento Endangered Species Office, a "no effect" determination for endangered species related to implementation of the COA. This concluded the Bureau's Section 7 consultation process for compliance with the Endangered Species Act. Attached is a copy of correspondence received from the ESO. The Fish and Wildlife Service Coordination Act evaluations and recommendations, along with our Biological Assessment for endangered species will be presented in the COA EIS/EIR.

The milestones of the preliminary schedule for compliance with NEPA and CEQA are as follows:

1. File the draft EIS/EIR with EPA and begin 60-day public review August 26, 1985.

2. Hold public hearings during the weeks of September 30 - October 11, 1985.

3. File the final EIS/EIR with EPA and begin 30-day public review April 18, 1986.

4. Sign Record of Decision and implement COA May 30, 1986.

Other Issues

46. On page 26, what is meant by Article 17, in which it is agreed that the State and the United States agree: "that they will respect each others project service areas"?

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Response:

Article 17 is simply intended to convey the thought that neither project will initiate water marketing programs in the other project's service area without an expressed invitation. The roots of this language extend to the May 16, 1960 agreement.

47. Article 22 (page 29): Please explain the second sentence in 22 (a). Federal employees are not specifically mentioned in this Article -- why are they excluded?

Response:

Subarticle 22(a) is included in numerous contracts and agreements entered into pursuant to Federal reclamation law to prohibit the U.S. officials identified therein from reaping direct personal benefits from the contract or agreement. The second sentence indicates that those officials are not prohibited from obtaining indirect benefits.

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CALIFORNIA DEPARTMENT OF WATER RESOURCES
Response to Questions Related to the
Coordinated Operation Agreement
Submitted on June 6, 1985 to
U. S. House of Representatives
Committee on Interior and Insular Affairs
Subcommittee on Water and Power Resources
Honorable George Miller, Chairman

Water Quality

1. Does the agreement as presently drafted provide sufficient assurances that Delta water quality will be protected, at least to the D-1485 level, during a drought year?

Answer

Yes -- both the Central Valley Project (CVP) and State Water Project (SWP) will be operated to meet the Delta water quality standards in Exhibit A. These standards are extracted from State Water Resources Control Board Decision 1485. Article 11 (a) specifies that the two projects will be operated to those standards. This level of protection will continue unless the agreement is amended. Amendment is called for when the State Water Resources Control Board adopts new standards and the Secretary of Interior determines they are not inconsistent with congressional directives.

The operation studies leading up to the agreement are based upon the 1928-34 drought. All inbasin needs and Delta water quality requirements are met in those studies. However, during a drought both projects will of necessity curtail deliveries to their contractors in accordance with contract provisions. The 1928-34 drought is customarily used for planning purposes as it is more severe, because of its long-term nature, than the 76-77 drought.

2. How much water will be required to ensure that D-1485 standards will be met?

Answer

The current estimate based upon 57 years of records, of the average water supply required to protect the Delta to D-1485 standards is approximately 5.8 million acre feet per year. A critical dry period such as occurred between 1928 and 1934 would have required an average of 4,986,000 acre feet per year (Exhibit B-1). Of this amount, 1,357,000 acre feet is consumed within the Delta and the remainder is outflow to San Francisco Bay.

3. Does the 75%-25% sharing formula mean that the CVP is responsible for supplying 75% of flows needed to meet Sacramento Valley inbasin uses (including Delta water quality standards) during a drought? If so, why does the CVP have three times as much responsibility to supply water needed to meet Delta water quality standards?

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Answer

The 75%-25% sharing formula applies to storage withdrawals when the Delta is under "controlled" or "balanced" water conditions. That is releases from project reservoirs and/or variations in export pumping are necessary to meet Delta water quality standards. These controlled conditions would prevail much of the time during a drought but, of course, not all of the time. The CVP is responsible for supplying 75% of the necessary flows. This was agreed to because the CVP has a much greater storage capacity and contractual demand within the Valley than does the SWP. CVP service area demands in the Sacramento Valley currently exceed three million acre feet per year, a major portion of the inbasin use. The SWP Sacramento Valley demands are approximately one million acre feet per years. The 75%-25% split and the 55%-45% split on the right to export unstored water during balanced water conditions were agreed to as being equitable.

Water Supply

4. As a result of this agreement, are there any explicit or implicit understandings or commitments to construct additional storage facilities, such as: Auburn Dam, the Peripheral Canal, Cottonwood, High Shasta, or Los Banos Grande?

Answer

There are no explicit or implicit understandings or commitments to construct any additional storage facilities. The parties do understand that should any additional storage facilities be constructed, the party that undertakes such construction will obtain the net benefits from the facility. Any adjustments to the COA sharing formula or Table B-1 will then be made in accordance with Articles 6 and 14 of the agreement.

5. Exhibit B(2) presents the annual water supplies for the two projects in the year 2020. This shows an increase of 900,000 AF of storage in the American River, and an increase of 400,000 AF in the Sacramento River. How were these increases computed? Were any assumptions regarding additional water storage made?

Answer

Exhibits B-1 and B-2 portray annual water supplies that may be delivered by both projects in each year during the 1928-1934 critical period. While it reflects water that has been stored, it is composed of both released stored water and water that is directly diverted for use. The increase of 900,000 AF in the American River basin and 400,000 AF in the Sacramento River Basin represent increases in service area demands and basin water use rather than increases in storage. The 900,000 AF increased use is assumed to be brought about through deliveries from the American River and Folsom South Canal or a variation of it to Southern Sacramento County and the East Bay Municipal Utility District. In addition to the

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900,000 AF, as note 6 on Exhibit B-2 indicates, 120,000 acre feet would be delivered above Folsom to satisfy Placer County Water Agency rights. The increase of 400,000 acre feet in the Sacramento River Basin is based upon additional CVP contractor use primarily from the Tehama-Colusa Canal. The increases were computed by varying the operations of Folsom Reservoir to meet the increased demands and by varying the operation of Shasta and the Trinity River facilities to meet increasing demands. No additional water storage facilities of the two projects were assumed. However, it was assumed that within the areas of origin there would be additional storage and use by others.

6. What is the current yield of the SWP?

Answer

Exhibit B-1 (1980 level) shows that the SWP would have an available supply of 3.7 MAF/yr; 1.0 MAF/yr for the lower Feather River service area and 2.7 MAF/yr for export from the Delta. Of the Delta export supply, approximately 0.2 MAF/yr would be lost through seepage and evaporation.

7. Please describe the importance of determining the annual water supplies for each project.

Answer

It is important to calculate the estimated annual supplies for planning, contracting, and operating each project. The 1980 level supplies are the basis for establishing the sharing formulas of the COA. The available water supplies can be contrasted with projected water demands to enable the timely development of projects to meet demands. Also, long-term contracts for the sale of water depend upon the amount available. The operation of the projects from one year to the next must take into account the storage requirements and contract curtailments necessary to meet the annual supplies that have previously been represented.

It is important to realize, however, that the operation studies used for supply calculations contain numerous assumptions and estimates and are based upon the historical hydrologic record. While history may repeat itself, it is unlikely it will repeat itself exactly. Also, it is certainly conceivable that we may have a drought that is worse than 1928 through 1934. Also, because of the assumptions made concerning future development and uses within the basins tributary to the Delta and the operational demands of the two projects, Table B-1 (1980) should certainly be considered more accurate than B-2 (2020). However, both of these Tables are our best efforts at calculating the annual supplies of the projects.

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Re-authorization

8. The 1937 CVP authorization declares that its facilities "shall be used first for river regulation, navigation and flood control; second for irrigation and domestic uses; and third for power." If water quality is to be a project purpose, where should it be placed in this list of priorities?

Answer

With the COA in place there will be no need to reauthorize the CVP for water quality purposes. As we have stated in answer to question 1, the CVP (and SWP) will be operated to meet the Delta water quality standards.

9. What is the life of this agreement?

Answer

The COA has no fixed term or expiration date and is designed to remain in effect for as long as both the CVP and SWP operate. Provisions allow for termination [Article 14 (b)(1) and (2)] if (1) a contract for the purchase and conveyance of water [Article 10(h)(1)] is not agreed to by December 31, 1988, or (2) amendments to water right permits are not received [Article 10(h)(4)] or (3) after periodic review the parties fail to reach agreement on revisions. Termination could only happen after an impasse in negotiations could not be resolved. Special provisions are included to avoid such termination. Article 14(b)(1) and (2) specifies the designation of a three person Advisory Board to consider, for one and two years, respectively, the problem causing the impasse. The parties must amend the COA and follow any unanimous recommendations of the Advisory Board and may only terminate if they fail to make such recommendations. It is highly unlikely that the agreement would be terminated as both parties recognize the necessity of coordinated operation to the projects and overall public interest.

The COA will require amendments to adjust to changing circumstances but the method of incorporating new facilities and adjusting the operating formulas will be followed for the foreseeable future.

10. What is the relationship between this agreement and the water rights granted by the State for each project? Will new water rights have to be granted?

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Answer

The COA was negotiated on the basis that the existing water rights of each project are adequate and no new water rights are necessary. However, the SWP and CVP need to add the other project's Delta pumping plant as an additional point of diversion to respective water right permits to reflect existing operational conditions. For many years the projects have pumped water for each other during facility outage conditions and other circumstances. The State Water Resources Control Board has indicated that it will postpone acting on this matter until the 1986 Delta standards hearings. To the extent that CVP water is sold to the SWP on an interim basis as contemplated in Article 10(h), additional water right permit modifications may be necessary. This matter will be addressed during negotiating sessions between the Department and the Bureau.

Contracting Issues

11. If water is made available by the CVP to meet Delta water quality standards, should it be done on a non-reimbursable basis? Who would pay if it was done on a reimbursable basis?

Answer

The Department takes no position on the Federal matter of how CVP costs should be allocated. The State Water Project considers meeting water quality standards in the Delta a reimbursable function, since Delta standards are based for the most part on mitigation rather than enhancement. It is a cost of doing business that is borne by our water supply contractors. For example, agricultural standards are based on protecting superior water rights of Delta water users. Similarly, fishery standards are based on maintaining the fishery at levels representative of "without project" conditions -- conditions that would be expected to have existed if the SWP and CVP had not been built. To the extent that enhancement of fish and wildlife and for recreation is provided, state law specifies such costs as nonreimbursable (Water Code section 11900 et seq.).

12. The COA provides for a process whereby a contract will be executed for the sale of water from the Federal CVP to the SWP (Article 10(h)). However, there is no process established for the sale of State Project water to the Federal CVP. Shouldn't there be such a provision?

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Answer

The intent of Article 10(h) is to deal with sale of firm water supplies on an interim basis. The SWP long-term water supply commitments exceed our present dependable supplies, and we expect this situation to prevail for the forseeable future. Accordingly, the SWP does not have excess firm, dependable water supplies available for sale, and we do not see a need for a SWP water sale provision in the COA. In contrast, the CVP will have excess supplies available for sale for the next 15-20 years, until such time as CVP service area demands increase and additional transportation facilities are built. While the SWP does not have excess firm water, in years we will have some supplies available in excess of demands. However, such excess supplies will exist at the same time as excess supplies exist for the CVP. During 1977, some SWP water was provided to CVP contractors under a special arrangement with the Metropolitan Water District of Southern California, (MWD) a major SWP contractor. In 1982 another special arrangement with MWD allowed SWP water to be provided to the CVP due to the repairs on San Luis Dam and consequent unavailability of San Luis Reservoir for full use of 1982. Such special arrangements are less likely in the future due to SWP water supply and demand circumstances. However, they can be accomplished without provisions in the COA.

13. Does this agreement explicitly or implicitly make any commitment or convey any understanding as to how and to whom water made available as a result of the COA will be placed under contract?

and

14. What criteria will be used to market water made available as a result of this agreement?

Answers

Provisions of Article 10(h) impose certain explicit preconditions to an expected agreement for sale of CVP water to the SWP. Those preconditions are specified in 10(h)(1), 10(h)(2), and 10(h)(3) of the COA. These preconditions contemplate that the SWP will provide conveyance services to transport CVP water to CVP contractors in exchange for availability of CVP supplies to SWP contractors.

Any water purchased by the SWP will be used to meet existing contractual obligations. No new contracts are anticipated.

Article 11

15. Please explain the factors and circumstances that led to the resolution of the issues raised in Article 11.

Answer

Article 11 covers two main areas. The first of these is the requirement that both projects must be operated to meet the Delta Water Quality Standards contained in Exhibit A. As previously stated in the response to question 1, these standards are extracted from the current State Water Resources Control Board Decision 1485. This never became an issue, because from the outset both parties had as a prime objective coordinated operations to the same water quality standards. When operations studies established that the projects could be operated to the standards in Exhibit A without jeopardizing existing contracts and the ability to meet project purposes agreement was readily arrived at.

The second issue covered in Article 11 concerns the applicability of any new standards that may be adopted by the State Water Resources Control Board. This clearly was the most difficult issue to resolve in the entire agreement. It represents a basic Federal/State conflict. Federal interests do not want to agree in advance to meet unknown and possibly unreasonable (in their view) future standards that may reduce the yield of the CVP, impact revenues or affect power generation. On the other side, the State Water Project is required to meet all validly adopted standards issued by the SWRCB. Should the Federal Government not "meet its share" of such standards there would be a greater impact upon the State Water Project. Beyond the impact to the State Water Project, the authority of the State Water Resources Control Board to condition water rights permits of the Central Valley Project is directly involved. This authority, of course, is considered to be a possible infringement on the authority of the Secretary of Interior to operate the CVP. In 1978, the U.S. Supreme Court ruled in California v. United States that the State Water Resources Control Board may impose conditions on the Central Valley Project that are not inconsistent with congressional directives respecting the project. Because the Congress will take action regarding the COA prior to its execution by the Bureau of Reclamation, the COA will in effect be a congressional directive respecting the project. During the long COA negotiations, it became apparent that there was no other way to deal with possible changes in the water quality standards than to leave it up to the courts under existing law. Therefore, Article 11 was constructed to be neutral on this issue. One factor that was considered is that changed water quality standards may never become a real issue. It is quite possible that the SWRCB will not adopt standards that the Secretary of Interior would consider as inconsistent with Congressional directives.

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16. Do you believe Article 11 will insure that the Federal government will do its share to meet Delta water quality standards now and in the future?

Answer

Yes, because of a growing and broad concensus that this must be the case.

Drought

17. If there were a recurrence of the 1977-1978 drought with the COA in place, how would the projects be operated differently to protect Delta water quality? What would be different about the projects' responses to the drought with the COA in place?

Answer

The main effect of the COA is that both projects would operate to provide the same level of protection to the Delta, i.e., the water quality standards in Exhibit A.

The greatest difference in operations from 1976-77 when the next drought occurs is that the 76-77 experience has resulted in a different, more cautious approach to operating both projects. The drought was the first time the projects had to operate under such conditions. The data obtained on actual conditions rather than previous assumptions were used in the operation studies and agreement on hydrology that are the foundation of the COA.

18. Please describe experiences that took place during the drought of 1977-78.

and

19. Which project had to assume major responsibility for Delta water quality protection during this drought?

Answers

The 1976-77 drought in California was the worst dry period since records have been kept and there were many experiences too numerous to mention here. The enclosed bulletin entitled "The 1976-77 California Drought - A Review" was issued in May 1978 which summarizes statewide experiences.

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Operation of State and Federal projects by the Department of Water Resources (DWR) and the U.S. Bureau of Reclamation (USBR) was complicated by the low storage in upstream reservoirs, high use throughout all service areas, and extremely low return flows. In 1976, the SWP was operated to maintain Delta water quality objectives established by the State Water Resources Control Board (SWRCB), whereas the CVP was operated to meet water quality standards deemed adequate for agricultural use. Thus, in 1976 coordinated Federal-State action was complicated by the USBR's failure to provide sufficient releases to maintain accepted standards of protection for Delta users, exposing its Contra Costa County customers to levels of salt content considered hazardous to health. As a consequence, DWR was forced to take certain actions to protect those and other users. During periods when the SWP was maintaining water quality standards different from CVP standards, the SWP provided about 85,500 acre feet of additional water for Delta outflows. If the CVP had been in agreement with the SWP on the water quality standards, the CVP would have provided about 48,000 acre feet of the additional water needed for Delta outflow.

Through 1976, it was possible to provide sufficient upstream storage releases to meet the applicable Delta water quality standards contained in the Water Quality Control Plans (Basin Plans) and the projects' water rights permits. By December 1976, however, it was clear that with the continuing drought, the State and Federal water storage facilities would be dangerously low if the projects continued to be operated to meet the standards. After hearings, the SWRCB adopted an Interim Water Quality Control Plan on February 8, 1977, which modified the Delta standards to levels that could be met with smaller project releases.

The SWRCB adopted a second modification on June 2, 1977, known as the "Emergency Regulation Order", which established drought emergency regulations for conserving limited water supplies upstream from the Delta and was to be in effect until December 31, 1977. It changed the Delta water quality standards to further reduce the quantity of water required for Delta outflow.

These SWRCB modifications were necessary to ensure that there would be enough water held over to protect the Delta if the drought continued into 1978. The Department estimated that if the February 8 interim standards remained in effect, power generation at Oroville would be halted during the summer. Also, the water supply would have been totally exhausted in November 1977 and again in the summer of 1978 if the drought continued. This would have resulted in salt

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water intrusion into the Delta with no water available to flush it out.

The water saved as a result of the two modifications remained in storage at upstream reservoirs of the SWP and CVP. Because November and December 1977 were also dry, on December 15, the SWRCB extended the June 2, 1977, emergency regulations into 1978. However, after late December 1977 and January 1978 storms, the water supply situation improved greatly and the Emergency Regulations were lifted on February 2, 1978.

Despite the reductions in Delta outflow requirements, both the SWP and CVP had to impose severe reductions of water deliveries to their contractors. The major event that helped alleviate the statewide water shortage was that The Metropolitan Water District of Southern California (a SWP water contractor) agreed to relinquish about 400,000 acre feet of its SWP water and increased its diversions from the Colorado River. The relinquished water was sold to other SWP contractors, non-contracting municipalities in the San Francisco Bay area, and approximately 8,000 acre feet was sold to the CVP agricultural contractors. The SWP also "loaned" 75,000 acre feet to the CVP during the peak 1977 irrigation seasons from San Luis reservoir. This was "repaid" in the fall of 1977.

Suisun Marsh

20. What is the present status of negotiations to determine how best to achieve water quality standards for the Suisun Marsh?

Answer

Substantial agreement has been reached in the negotiations. Two issues remain unresolved. These involve the question of interim standards for the western Marsh prior to construction of all facilities and the question of whether or not specific performance toward compliance with the contract can be required of the U.S. Bureau of Reclamation. It is the position of the USBR that there has been no waiver of sovereign immunity to cover the proposed agreement. It is anticipated that these issues can be resolved and negotiations concluded in 1985. The parties to the agreement will then petition the State Water Resources Control Board to adopt the water quality standards of the agreement and incorporate the agreement in the projects water rights.

21. How will any agreement reached on the Suisun Marsh be integrated with the COA?

Answer

The COA contains a provision for amendments to integrate new facilities (Articles 14 and 16). The water quality standards pertaining to the Suisun Marsh would be amended into Exhibit A and any adjustments necesary to the sharing formula and Exhibit B would

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be made in accordance with Articles 11 and 6 respectively. It is anticipated that prior to the fall of 1988, when the new standards contained in the Marsh Agreement will start to take effect according to an agreed upon schedule, an amendment to integrate the Marsh Agreement with the COA will have been negotiated.

22. Will facilities need to be constructed in order to insure protection of water quality in the Suisun Marsh?

Answer

Yes, facilities will be required. Ensuring protection of the Marsh with outflow alone during dry periods would require exorbitant quantities of water and is considered to be a waste of water under the California Constitution. Three of the facilities needed to ensure protection of water quality in the Suisun Marsh have already been constructed. These are: the Morrow Island Distribution System, Goodyear Slough Outfall, and Roaring River Slough. The next facility to be constructed is the Montezuma Slough Control Structure. Construction on this facility is anticipated to begin in early 1986, with completion in the fall of 1988. The full extent of any additional necessary facilities will be determined by examining the effects on water quality of the operation of these facilities.

Other Issues

23. On page 26, what is meant by Article 17, in which it is agreed that the State and the United States agree: "that they will respect each others project service areas"?

Answer

This is a provision carried over from the 1960 Agreement that merely means that we are not going to compete with each other for "customers".

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Testimony
of
DAVID R. SCHUSTER
State Water Contractors

Before the
Water and Power Resources Subcommittee
House Committee on Interior and Insular Affairs

May 23, 1985

Mr. Chairman:

I am David R. Schuster, General Manager of the State Water Contractors, a non-profit organization representing 28 of the 30 public agencies that contract for State Water Project water. Thank you for this opportunity to discuss the State Water Project contractors' position regarding the May 8, 1985, draft of the "Agreement Between the United States of America and the Department of Water Resources of the State of California for Coordinated Operation of the Central Valley Project and the State Water Project."

The contractors have monitored the Coordinated Operations Agreement negotiations since they started in 1979. The purpose of this agreement is to determine the share of surplus water in the Delta for the State Water Project and the federal Central Valley Project and to guarantee that each project bears its share of the obligation to protect beneficial uses of water in the Delta and the Sacramento Valley. The final result of this effort is a determination of the amount of water each project can deliver on a dependable basis to its contractors. Since the State Water Project contractors' need for water is greater than the project is capable of delivering during a drought, the determination of the project's dependable water supply is of critical

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importance. The stakes of these negotiations were high for both state and federal contractors. I am here today to support the outcome of the negotiations and explain why the State Water Contractors believe the agreement's method of sharing surplus Delta flows is fair and equitable.

The development of the May 8, 1985, draft agreement is the result of almost thirty years of negotiations. The first agreement was signed in May 16, 1960. This agreement provided a crude method of allocating Delta water supply shortages between the two projects, resolved the protests of each party to the applications of the other for water rights, and provided for the negotiation of a more effective method of allocating available supplies. That negotiation began in 1961 and resulted in a May 13, 1971, draft.

This 1971 draft was used to coordinate the operations of the two projects through 1983. It also provided a very good technical foundation upon which the 1985 draft was developed. However, experience gained while operating the two projects under the 1971 draft has proven that it does not allocate the shares of water fairly between the two projects. The main reasons for this is due to certain assumptions used to develop the agreement which have since been proven incorrect, such as the assumption that facilities such as Auburn Dam and the Peripheral Canal would be operating during the 1970's. In addition, the amount of water needed to meet the water quality needs of the Delta was grossly underestimated.

The 1985 draft is a culmination of all the technical work that proceeded its negotiation. This agreement computes the shares of water available to

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each project based on a methodology that assumes existing facilities only and the existing California State Water Resources Control Board's Delta water quality standards. The procedures and technical assumptions behind that methodology can be easily adjusted if necessary to allow for the inclusion of a new state or federal project facility or for a change in Delta water quality standards. The 1985 draft agreement provides a firm technical base for the coordination of the operations of the two projects and a base which can be easily adjusted in the future to account for unforeseen changes. The methodology for determining each project's respective share of surplus Delta water should not have to be renegotiated again in the foreseeable future.

The State Water Contractors' decision to support the execution of the 1985 draft agreement has not been an easy one. As is usually the case in the resolution of a problem of this magnitude, each side has had to give on some long held and strongly felt positions to reach an agreement that was acceptable to both. The contractors have had to balance the losses against the gains before determining the agreement should be supported. Examples of the trade-offs each side has made to reach agreement include:

- The 1971 draft's methodology for allocating the water was unfair to the Central Valley Project and advantageous to the State Water Project. The state gave up this advantage in the new draft.

- The export pumping from the south Delta by both projects often causes flow reversals in the lower San Joaquin River. These flow reversals result in the dedication of more water to meet the water quality needs

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of the Delta than would be needed without the flow reversals. The State Water Project is responsible for this loss of available water supply in the new agreement.

- The studies used to develop the 1985 draft establish a priority of use for the facilities of each project. The priority is based on when a particular facility started operation. Since most of the existing Central Valley Project facilities started operation prior to the construction of the State Water Project, the Central Valley Project is given, in the base studies, the first right to use the available water supplies in the Delta.

- The existing state Delta water quality standards were used to establish the water quality needs of the Delta, not the less stringent water quality objectives in the federal water service contracts.

- As discussed above, the studies used to develop the 1985 draft establish a priority of rights for each project facility to develop a dependable supply. The priorities are based on when each facility began operation. The studies also give the facilities with the highest priority the sole obligation to protect the beneficial uses in the Delta and in the Sacramento Valley. This means that, as the priority facility in operation, the federal Central Valley Project is fully obligated to protect the beneficial uses of water in the Delta and the Sacramento Valley in the base studies. The State Water Project, with a priority following the Delta, Sacramento Valley and

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the initial Central Valley Project facilities, develops its dependable water supply from water that are surplus to those needs.

In making the decision to support the 1985 draft agreement, the contractors considered five major factors. First and foremost was the fact that this agreement establishes the existing state Delta water quality standards as the base for the operation of the two projects. Under Article 11 of the agreement, these standards would not be changed unless the State Water Resources Control Board establishes new Delta standards.

Second, if the Delta water quality standards are changed by the Board, and the Secretary of the Interior decides not to meet the new standards under Article 11, the state and federal governments will be at odds once again over the issue of protecting Delta water quality. However, the nature of that future disagreement would be dramatically different than in the past if the 1985 draft agreement is executed. No longer will the argument be whether the Central Valley Project is authorized to maintain better Delta water quality than required in the project's irrigation contracts. Instead, the issues will center on questions concerning the adequacy of the new Delta water quality standards to protect beneficial uses such as Delta agriculture, fish and wildlife, and municipal and industrial water needs; and the balancing of these needs against the needs of the federal and state project water users. These issues are consistent with the State Water Resources Control Board's responsibilities in establishing Delta water quality standards and brings the federal government into the standard setting process as an active participant.

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Third, the methodology used to determine the sharing of the available water provides a certainty to the future. We can now determine how water supplies would be split in the future under various assumptions, and can plan for the future with greater confidence.

Fourth, the question of federal help in protecting the Delta has hampered past efforts to develop political consensus on completion of the State Water Project. Execution of the 1985 draft agreement will eliminate this issue from discussions at the state level.

Fifth, execution of this agreement will allow the state and federal government to move forward on other issues of importance to federal and state contractors. For example, the following cannot be accomplished without an executed Coordinated Operations Agreement: mitigation of state and federal project impacts on the Suisun Marsh; purchase of Central Valley Project water by the State Water Project on a recallable basis, and providing aqueduct capacity in State Water Project facilities to the Central Valley Project for transporting federal water to federal contractors.

In summary, the State Water Contractors strongly support the 1985 draft Coordinated Operations Agreement. The contractors see the agreement as an important first step in a process of resolving differences between the various interests that have been fighting over the Delta for years. The contractors urge quick action by the Congress to approve legislation authorizing execution of the COA. This legislation should not be amended to include other water projects or attempt to resolve other issues, as such amendments would detract

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I want to thank you once again, Mr. Chairman, for this opportunity to testify on the Coordinated Operations Agreement.

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ENVIRONMENTAL DEFENSE FUND

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BEFORE THE UNITED STATES

HOUSE OF REPRESENTATIVES

COMMITTEE ON

INTERIOR AND INSULAR AFFAIRS

SUBCOMMITTEE ON WATER AND

POWER RESOURCES

TESTIMONY OF THE

ENVIRONMENTAL DEFENSE FUND

ON THE DRAFT AGREEMENT BETWEEN THE

UNITED STATES OF AMERICA AND THE

DEPARTMENT OF WATER RESOURCES OF

THE STATE OF CALIFORNIA FOR

COORDINATED OPERATION OF THE CENTRAL

VALLEY PROJECT AND THE STATE WATER PROJECT

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THOMAS J. GRAFF

SENIOR ATTORNEY

WASHINGTON, D.C. May 23, 1985

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MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

Thank you for inviting me to testify here today on the May 8, 1985 draft coordinated operation agreement (COA) between the Central Valley Project and the State Water Project. I appear today on behalf of the Environmental Defense Fund and its members, but more importantly I will attempt to speak for the San Francisco Bay/Delta estuary. No environment in California is more profoundly affected by the COA than the Bay/Delta's, although certainly both the San Joaquin Valley and the great urban complex south of the Tehachapis are intimately involved as well. But others, particularly those who contract for water from the State and Federal governments, will speak today on behalf of the San Joaquin and southern California. Thus, although I recognize that all who work seriously on the management of California's water resources have obligations to the whole state, not just to one region, my emphasis will be on needed protection for the Bay and Delta.

The Bay and Delta do need a COA. They need assurance that the Central Valley Project will be operated not only to provide life-giving irrigation water to the fields of the Central Valley (as well as incidental power and municipal and industrial water to various public entities in northern California), but that it also will be operated to provide reasonable levels of freshwater flow to the Delta and to San Francisco Bay to help protect the public trust in those waters.

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The real question before you today, in my judgment, is whether the May 8 COA draft provides that assurance. My answer to the question is: No, it does not provide that assurance, but it does commit the Bureau of Reclamation to a little more protection than it has admitted was its responsibility in the past. The result is a qualified partial endorsement by EDF of the May 8 draft.

Before I address the problems which we see in the May 8 draft, let me note its considerable strengths. Most important, Article 6 of the draft resolves in a manner satisfactory to both the state and the federal project the extraordinarily difficult and complex issue of the relative contributions the two projects will make in discharging their respective responsibilities for maintaining Delta outflow. The 75-25 and 55-45 percentages established in Article 6 may seem simple enough; the hydrology and the political compromising that underlie those numbers were impressively complicated. Both incumbent administrations and their immediate predecessors deserve praise for coming to an agreement on this matter rather than having a court of law try to sort out the projects' relative priorities.

The projects also deserve limited praise for their agreement in Article 11. The Bureau of Reclamation, in that Article, has agreed that it will operate the CVP in coordination with the SWP to meet the Decision 1485 standards of the State Water Resources Control Board. That is an important commitment on the Bureau's part.

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What then are the COA's major weaknesses? In my judgment, there are three:

(1) The agreement is only for a limited duration;

(2) The agreement leaves ambiguous what will be the Central Valley Project's response when new Delta standards (and Bay standards) are adopted by the State Water Board (and approved by EPA); and

(3) The agreement includes provisions for the sale and wheeling of CVP water to and by the SWP which will potentially commit a significant amount of additional water to Delta export that would otherwise be available for Delta outflow required to meet the needs of the Delta, of Suisun Marsh, and of San Francisco Bay.

In a moment, I will attempt to explain these criticisms in greater detail. First, however, I do think that it is important at this stage for me to note that I do not believe we are necessarily engaged here in a zero sum game. It is not the case that an extra acre foot of water use in the Valley or in southern California must mean an acre foot less of Bay/Delta outflow. There are alternatives to this formulation. Some do not involve Delta exports at all. For example, an extra acre foot of conserved water in the Imperial Valley, when leased or purchased by the MWD or some other agency, may serve urban southern California just as reliably and at a lower cost than an extra

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acre foot of Delta export. The same is true if a Westlands farmer trying to avoid shutting down because of drainage problems saves water and seeks to sell it in southern California. Other alternatives do involve Delta export, but also involve less in-basin consumptive use. Thus, if a Sacramento Valley rice farmer chooses to grow a less water-intensive crop or turns to irrigation scheduling or laser levelling of his fields and the institutional structure is in place to allow these farmers to sell the water conserved by their actions, Delta export may be increased while Delta outflow stays the same.

The key test for the COA should therefore be whether it facilitates water transfers of the types just enumerated as an alternative to the export of additional Bay/Delta water south. Because it lacks certainty, since its commitment to Bay/Delta standards is of limited duration and ambiguous in its scope, and because it seems to prefer the diversion of "additional" water south to the transfer of newly "conserved" water, we submit that the COA fails this key test.

The COA is of limited duration because by its own terms either party can terminate the agreement any time after December 31, 1988 on 180 days' notice if permits have not been received for the export of additional water south. Article 10(h)(5). The COA can also be terminated without notice if a one-year long arbitration process begun early in 1989 does not result in a unanimous recommendation of terms for a contract for the sale and wheeling of CVP water to and by the SWP. Article 14(b)(1).

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Finally, the COA can be terminated if one of the parties requests an amendment to the agreement to which the other party does not agree and three years have passed in fruitless negotiation and arbitration. Article 14(b)(2).

The COA is ambiguous in its commitment to Delta protection and silent in its commitment to Bay protection because it does not specify what will be the United States' reaction when new Delta standards and initial Bay standards are set by the State Water Board (an action currently scheduled to take place in 1988). Article 11 gives the U.S. authority to comply with new Delta standards (Bay and Suisun Marsh standards are not included) if it determines the new standards are not inconsistent with any Congressional directives. But assuming the U.S. determines that the new standards are inconsistent with Congressional directives, the agreement does not specify whether the U.S. will abide by the new standards pending the outcome of litigation over those standards. The agreement also does not require (it only permits) the U.S. to seek enactment of legislation resolving any alleged inconsistencies between the new standards and existing law. Thus, Article 11 is a step in the right direction insofar as it obtains a current Bureau commitment to existing Delta standards, but it is also inadequate because it leaves major ambiguities as to the extent of the Bureau's commitment to meet future standards for the Delta and Bay, an inadequacy rendered especially grave by the attempt in Article 10 potentially to commit large amounts of

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additional CVP water for export both to the SWP and its contractors and to CVP contractors as well.

Some will argue that the Bureau's current commitment in Article 11 to providing its share of Delta outflow to meet the requirements of D-1485 is so important that the agreement should be approved even if it is uncertain how long the Bureau's commitment will last or what its scope will be in the future. There is strength to this argument. Once the Bureau is finally on record that it has a contractual obligation to the Delta, it may not be so difficult to convince future federal Administrations that they should contribute to the meeting of new improved Delta standards or even of Bay standards. It surely would not be easy for the Bureau to walk away from the COA in 1989.

On the other hand, if the new standards adopted in 1988 are considerably more protective of the Bay and Delta than were those the Board adopted in 1978, as EDF and many Bay/Delta advocates believe they should be, then the Bureau may well renege on its Delta commitment. Recall that under the existing standards, the Delta striped bass fishery has declined to less than 20 percent of its historic level. Note that EPA approved the D-1485 standards in 1980 only on the basis that the fish protection standards established in D-1485 actually be met in practice, a condition subsequent that all agree has not been met. And realize that all the competent fish biologists who have studied Bay/Delta fisheries, irrespective of what their views might be on the

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advisability of one or another physical facility in the Delta, concur on one point. They all agree that levels of Bay/Delta outflow and of project diversions, especially during periods critical for fish spawning and habitat preservation, are both crucial factors in determining Bay/Delta fish survival rates.

If the Bay and the Delta are to be protected, therefore, it will take more than a signed COA. It will take more Bay/Delta outflow.

Yet, as I have already noted, Article 10 of the May 8 COA is a prescription for less Bay/Delta outflow, not more. The principal purpose of the newly revised Article 10 is to permit the CVP to sell more water, in equal shares to the SWP and to its own contractors. In the January 30 draft of the COA, which was the last version available to EDF and others of the interested public before the last-minute flurry which produced the May 8 draft, the issue of a future accord on SWP conveyance and purchase of CVP water was limited to three brief subparagraphs. The January 30 version of the COA merely called on the parties to promptly commence negotiating, noted that permits would need to be obtained if a contract was to be successfully consummated, and stated that if agreement was not reached by December 31, 1988, either party could undertake proceedings leading to the termination of the entire COA. EDF, by letter of January 28 to Directors Houston and Kennedy, had strongly criticized these provisions, particularly the termination provision in then subparagraph 10(h)(3).

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Now in the May 8 draft, while the projects have retained the unfortunate termination provision in its essential terms, they have also substantially fleshed out the terms of the projects' proposed conveyance and purchase contract. These terms give the CVP priority to any available space in the California Aqueduct. They also require the SWP to convey an equal amount of additional CVP export water to that which it purchases on its own account for SWP export.

EDF has not had the time or the opportunity to analyze the probable effect of these provisions in detail. But our tentative judgment is that these provisions, apart from taking a major step toward increasing the projects' Delta exports, also will make it more difficult rather than easier for the Sacramento Valley rice farmer or the Westlands farmer with drainage problems to sell excess water to San Diego. They therefore need very careful scrutiny before they are approved. The CVP, as a potential water seller to the SWP, already has several tremendous advantages over the farmers who I have just postulated might voluntarily want to sell their excess water. First, the CVP's current melded rate for pumping irrigation water is less than a half cent per kilowatt hour. By comparison, PG&E's cheapest residential electricity rate is over six cents per kilowatt hour. Thus, pumping CVP water to O'Neill Forebay costs a potential buyer less than $1.50 per acre foot. At SWP pumping costs, the charge would be over $8.00 per acre foot, while at even the cheapest PG&E residential rate, the charge would be over $18.00 per acre foot.

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Second, the CVP (and indeed the Bureau as a whole) has been very slow to take a position as to whether its contractors may conserve and resell CVP water at a profit, even though state law clearly contemplates and approves such exchanges. Thus, even as Westlands farmers currently struggle with the problem of how to shut off the flow of drainage water to Kesterson Reservoir and are being approached by prospective water buyers from San Diego, the Bureau has been silent as to whether it would allow (or indeed encourage) such an exchange to occur.

Finally, the two other potential major water middlemen in the state, the SWP and the MWD, have thus far shown just as little inclination to get involved in brokering water transfers around the state (among others than themselves) as has the CVP. Indeed, every time San Diego has shown an entrepreneurial initiative toward the obtaining of an additional water supply for itself, the MWD has thrown cold water on the idea, raising both legal and competitive impediments to San Diego's activity.

To sum up, in EDF's judgment, as long as the big three (the CVP, the SWP and the MWD) continue to drag their feet, the potential for significant water marketing around the state will go unrealized. And as long as that potential is unfulfilled, the battle over nearly every drop of Bay/Delta water--should it be exported or should it be dedicated to Bay/Delta outflow?--will continue unabated.

What then should Congress do with the May 8 COA? Our advice is simple. Ask the projects to decouple Article 10 from the rest

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of the agreement. EDF can live with Article 11, even though it isn't perfect. We would look forward to four years of experience living under the joint operation contemplated in Article 6 and take our chances that the Bureau won't walk away from the deal in 1988 if standards are toughened. But we would not trade that approval of the Bureau's commitment to Delta standards (which is anyway required by existing law) for acquiescence in substantial additional Bay/Delta exports and at best benign hostility to the water marketing alternative. The issues raised by Article 10 deserve careful assessment independent of the COA with a great deal more public and political debate than they have yet received. We would therefore urge this subcommittee to report a bill approving the COA, with Article 10 modified to defer the question of wheeling and purchase of additional CVP water to another day.

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STATEMENT OF R. L. SCHAFER*
BEFORE THE UNITED STATES CONGRESSIONAL COMMITTEE
ON INTERIOR AND INSULAR AFFAIRS
SUBCOMMITTEE ON WATER AND POWER RESOURCES
THE HONORABLE GEORGE MILLER, CHAIRMAN

Mr. Chairman and members of the Committee, my name is R. L. Schafer; I am here representing Central Valley Project contractors, the Mid-Valley Water Authority and the San Joaquin Valley Agricultural Water Committee; all are situated within the San Joaquin Valley of California.

I serve as Chairman of the Advisory Committee and as Chairman of the Negotiating Committee of the Mid-Valley Water Authority (MVWA). The MVWA, a Joint Exercise of Powers Agency, consists of 29 public agencies within six counties of the San Joaquin Valley, California and covers approxiately 3.4 million acres of irrigated agriculture. The MVWA was formed December 3, 1982, for the principle purposes of (1) Obtaining additional supplemental water supplies, and (2) Development of additional conveyance facilities for delivery of the supplemental water supplies to satisfy the projected needs and the groundwater overdraft within the MVWA service area.

I also serve as Chairman of the San Joaquin Valley Agricultural Water Committee (AWC). The AWC has a membership of 128 water agencies within the San Joaquin Valley from Tracy to the Tehachapis and covers approximately 4 million acres, a large portion of which is also within the MVWA. The AWC was created in 1976 to

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*R. L. Schafer, Civil Engineer, Visalia, California
Chairman, Advisory Committee Mid-Valley Water Authority
Chairman, San Joaquin Valley Agricultural Water Committee
Statement presented in the hearing on the proposed "Agreement Between the United States of America and the Department of Water Resources of the State of California for Coordinated Operation of the Central Valley Project and the State Water Project", USBR/DWR Draft, Rev. USBR 05/08-1985, Washington, D.C. May 20, 1985

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provide a forum for development of policy and position upon specific issues from the individual and collective views of the members and for the collection, coordination and dissemination of information for the membership in all matters related to water, energy and drainage in the San Joaquin Valley.

Mr. Chairman, we view the proposed Coordinated Operation Agreement (COA), after many years of negotiation and operation in the Delta, as the "Text Book" for the successful operation of those two vital water projects of California known as the State Water Project and the Federal Central Valley Project.

The Agreement provides assurance that each project will obtain its rightful share of water from the Delta and will bear its fair share of obligations to protect other beneficial uses of water in the Sacramento Valley and in the Delta.

The water agencies I represent believe the COA is in their best interest and support its execution and implementation for the following reasons:

1. Coordinated operations under agreed upon criteria will increase the efficiency of both projects by providing a more accurate projection of water supplies and a more precise regulation of operations.

2. The Agreement quantifies the annual water supplies that are available to the CVP and SWP respectively. We have relied upon and accepted the Bureau's yield studies developed under the proposed agreement. The CVP firm yield of 8.3 million acre-feet as derived under the hydrologic conditions that prevailed during the dry seven-year period, 1928 through 1934, allows <u>without question</u> the Bureau's capability for placement of an additional one million acre-feet of firm CVP water under contract once the moratorium is lifted.

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The Mid-Valley Canal project is a classic example of the uncertainty that may creep into water resource development without a clear understanding as to the operations between the CVP and the SWP in the Delta. In 1980, the Bureau and the Department of Water Resources completed a Mid-Valley Canal feasibility investigation for the delivery of approximately 500,000 acre-feet per year of firm CVP water to districts within the San Joaquin Valley; but, prior to the authorization of the Mid-Valley Canal by the Congress, the United States placed a moratorium on future CVP contracts until Delta water quality considerations were resolved.

The MVWA now represents the Mid-Valley Canal service area and as a result of the proposed COA the authority anticipates the development of contracts with the Bureau for the delivery of firm, interim and intermittent water supplies that will average one million acre-feet per year.

3. The COA should avoid further litigation and controversy regarding relative priorities of CVP and SWP water rights permits.

4. The Agreement provides certainty as to the Delta water quality obligations of the CVP.

5. The COA protects and continues the commitment of the CVP water necessary for the performance of the San Joaquin River exchange contracts which are the keystone of the entire Friant Division of the CVP.

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6. The COA provides the operators of the two projects with rules for the day-to-day operations and assures that each project is obtaining its share of exportable water in the Delta and each is suppling its share of water for the Delta and the Sacramento Basin.

7. The COA institutes wheeling and exchange arrangements and provides for more efficient use of water supplies and transportation facilities.

It has always been the position of the water agencies I represent that any Delta water quality CVP contribution other than that which is incidental to meeting the Tracy Pumps contractual water quality requirements is a new presently unauthorized project purpose and, therefore, execution of the COA requires the express authorization of the Congress, and further that authorization must be limited to the precise terms of this Agreement.

The CVP contractors believe that the cost to the project for meeting new water quality obligations under the COA should be designated a non-reimbursable cost and the allocation of the remaining CVP costs should be re-examined particularly in light of the new water pricing policy. Should congressional authority be required for CVP cost reallocations, that authority should be a part of the legislation authorizing execution of the COA.

We believe the proposed COA adequately protects the beneficial uses of water in the Sacramento Valley and in the Delta through the incorporation of Exhibit "A", "Standards for the Sacramento-San Joaquin Delta" as promulgated by the State Water Resources Control Board of the State of California.

Article 11 of the COA provides a procedure to be followed should the State Water Resources Control Board establish "New Delta

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Standards", and the provisions thereof do not preclude the Bureau from meeting a new Delta standard so long as to do so would not be inconsistent with congressional directives.

Mr. Chairman and members of the Committee, in summary we believe the COA is fair and equitable for all parties and in the best interest of water resource development in California. We request the assistance of your Committee with Federal legislation that would allow the execution of the Agreement by the United States.

Thank you for the opportunity of appearing before your Committee today.

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Statement of
Warren J. Abbott
General Counsel
Metropolitan Water District
of
Southern California
before the
Water and Power Resources Subcommittee
of the
House Interior and Insular Affairs Committee

May 23, 1985

Chairman Miller, members of the Committee, my name is Warren J. Abbott. I am General Counsel of The Metropolitan Water District of Southern California. I am here today to urge Congressional support for the Coordinated Operations Agreement negotiated between the Federal Bureau of Reclamation and the California Department of Water Resources.

As you know, Mr. Chairman, the Metropolitan Water District is responsible for importing approximately one-half of the water used in Southern California. Our service area contains over half of the population of the State of California.

Two weeks ago, in Anaheim, Metropolitan's General Manager, Carl Boronkay, outlined for this Committee the efforts we are making to firm up the water supply that will be needed by the turn of the century. We will not only have to provide for our still growing population, but also must compensate for existing Colorado River supplies that will be lost to Arizona.

One of Metropolitan's major efforts is to firm up the yield of the State Water Project. Metropolitan is the largest of the State Water contractors with an ultimate entitlement to

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nearly one-half of the Project's yield. Even if we are successful in our other efforts, particularly on the Colorado River, we will gradually need our full water entitlement from the State Water Project. We believe the Coordinated Operations Agreement is a major step towards the completion of the State Project.

Mr. Chairman, you have already received a briefing on the technical provisions of this Agreement.* We endorse those provisions, believing that they represent in total a fair and responsible allocation of both the benefits and obligations of the operations of these two great water supply systems in the Sacramento-San Joaquin Delta. Beyond that, however, we see extensive long-term benefits to Southern California from this Agreement:

First, it removes from the debate on State Water policy a long-standing area of contention and divisiveness;

It provides a united and rational approach to meeting Delta water quality standards;

It will result in a substantial additional quantity of water for the State Water Project during dry periods, one-half of which will be available to Metropolitan;

It opens the way to the purchase of CVP water, on an interim basis, by the State Water Project, which will allow time for deliberate and rational study and discussion of what

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* A copy of Metropolitan's summary of the Agreement is attached to this statement.

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additional facilities are needed for the completion of the State Water Project; and

Finally, it constitutes a major building block for the construction of a state-wide consensus on solving the water needs of all of California.

Accordingly, Mr. Chairman, Metropolitan urges immediate Congressional approval of the Coordinated Operations Agreement.

We thank you for the opportunity to testify today. I will be happy to respond to any questions you might have.

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THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Summary of
State Water Project-Federal Central Valley Project
Coordinated Operations Agreement

In planning the State Water Project (SWP) some 30 years ago, California recognized the importance of avoiding confrontation with the federal Central Valley Project (CVP) over rights to surplus Delta waters. The United States and the State accordingly entered into a water rights agreement in 1960, which also required development of a mutually acceptable coordinated operation agreement for the two projects.

Ten years later, in 1971, California and the United States reached a tentative SWP-CVP coordinated operation agreement. Pending development of a final agreement and completion of necessary environmental documentation and Congressional approval, the parties have since then coordinated operation of the two projects by annual letter agreements.

The 1971 agreement allocated obligations between the two projects for protecting the Delta, and their respective use of surplus Delta water. Unfortunately, it based

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those allocations on construction of water development facilities planned in 1971, such as Auburn Dam and the Peripheral Canal, that have not yet been built; and on Delta outflow requirements which have now been determined inadequate. Those factors, together with operational experience over the past 14 years has demonstrated a need to change the 1971 agreement.

California and the Bureau of Reclamation have accordingly reached an agreement on those changes and incorporated them in the proposed Coordinated Operations Agreement (COA) now before this committee. In our view, the more important changes include the following:

1. Basing the calculation of water supply allocations on the basis of existing facilities only.

2. Defining surplus Delta water more accurately and allocating it more precisely between the CVP and SWP.

3. Requiring the CVP to meet State Water Resources Control Board (SWRCB) standards established in Delta Water Rights Decision 1485, thus insulating the SWP from the question of whether it would make up Federal deficiencies in time of shortages.

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4. Enhancing the dry period yield of the SWP by approximately 200,000 acre-feet through better definition of surplus, and obtaining CVP agreement to meet Delta outflow standards.

5. Directing the parties to negotiate an agreement for the conveyance and purchase of CVP water to allow more efficient use of the two projects. Under that concept, California would convey CVP water through unused SWP capacity for CVP water users; and the United States would sell water which the CVP will not need over the next 10 to 30 years in order to augment the SWP dry period yield on an interim basis. That interim water could total as much as 500,000 acre-feet annually.

6. Providing a method for incorporating future changes in SWRCB Delta standards, under which the Federal Government may obtain a judicial determination of whether those changes are inconsistent with Congressional directives.

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BEFORE THE UNITED STATES
HOUSE OF REPRESENTATIVES
COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS

SUBCOMMITTEE ON
WATER AND POWER RESOURCES

Honorable, George Miller, Chairman

TESTIMONY OF THE CONTRA COSTA WATER DISTRICT

ON

FEDERAL CENTRAL VALLEY PROJECT

CALIFORNIA STATE WATER PROJECT

COORDINATED OPERATIONS AGREEMENT

Presented by:
John E. DeVito
General Manager

WASHINGTON, D.C. MAY 23, 1985

(415) 674-8025
1331 Concord Avenue, P.O. Box H20, Concord, CA 94524

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RESOLUTION NO. 84-23.1

A RESOLUTION OF THE BOARD OF DIRECTORS OF CONTRA COSTA WATER DISTRICT URGING THE CONGRESS OF THE UNITED STATES TO ENACT LEGISLATION REGARDING THE OPERATION OF THE CENTRAL VALLEY PROJECT

WHEREAS, the San Francisco Bay, Suisun Marsh and Sacramento-San Joaquin Delta comprise a fragile estuarine system which is totally dependent upon a delicate balance of fresh and salt water and would be severely affected by excessive salt water intrusion from the Pacific Ocean, and

WHEREAS, degradation of the quality of the water in the Bay-Delta system has been primarily due to fresh water flow diversions in the Delta and from the tributary streams and, at times, by the operations of the Central Valley Project and the State Water Project, with severe detriment to water users in and from the Delta, and

WHEREAS, the Central Valley Project was conceived, planned and designed to control the salinity of the waters of the Bay-Delta System in order to consistently provide an adequate water supply of proper quality for beneficial uses supplied from the Delta, and

WHEREAS, it is in the public interest and consistent with the national policy enunciated in the Federal Clean Water Act and other Acts that the quality of the waters of the Bay-Delta be maintained at levels necessary to assure their beneficial uses including irrigation, municipal use, domestic consumption, industry, fish and wildlife enhancement, and recreation, and

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WHEREAS, the experience of the past two decades clearly demonstrates that effective water quality control in the Bay-Delta System can be achieved only by the coordinated operation of the Federal Central Valley Project and the State Water Project, with upstream storage allocated to that purpose, and conversely, that if these great projects are not so operated, immense damage will be done to the economy and the environment, and

WHEREAS, under current conditions, only the California State Water Project is clearly required to maintain water quality standards for the Bay-Delta System which are from time to time established by the State Water Resources Control Board consistent with the principles of the Federal Clean Water Act. As a result, there now exists uncertainty as to the ability of the State Water Project to meet Bay-Delta Water Quality Standards and concurrently, meet State Water Project contractural obligations, and

WHEREAS, without clear authority to accommodate changes in Bay-Delta water quality standards, under present Article 11 language of the Coordinated Operations Agreement, the Congress could in fact be fixing an incomplete numerical Delta standard (D 1485) which is an interim decision to be reopened commencing in 1986 for consideration of other appropriate beneficial Bay-Delta uses, and

WHEREAS, in the original California CVP Act of 1933, the California Legislature declared that the four "primary purposes" of the Project were (1) improvement of navigation, (2) flood

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control, (3) "Salinity control in the Sacramento-San Joaquin Delta", and (4) water supply. This is now in California Water Code, Section 11207, and

WHEREAS, the USBR has repeatedly represented to the SWRCB (at the hearings on decisions 990, 1020, 1308, 1356, 1379, 1400 and 1485) that it could not operate the CVP to provide water quality control for the Delta because water quality control was not a Congressionally authorized purpose of the Project, and

WHEREAS, the only feature of the CVP that now provides a degree of quality control for the Delta is the New Melones Dam on the Stanislaus River. In this case, the authorizing act stated specifically that "regulating streamflow for downstream water quality control" is an authorized Project purpose. (Public Law 87-874, 76 Stat. 1191). No other unit of the CVP is similarly authorized, and

WHEREAS, section 9c of the Reclamation Project Act of 1939 states, "No contract relating to municipal water supply or miscellaneous purposes or to electric power or power privileges shall be made unless, in the judgment of the Secretary, it will not impair the efficiency of the project for irrigation purposes" (59 U.S. Stat. 1194; 43 U.S. Code Section 485h(c)). The Bureau has asserted that providing water quality control would be inconsistent with this Congressional directive, and

WHEREAS, the original authorization of the CVP by President Roosevelt's Executive Order of September 10, 1935, stated simply that the purpose of the appropriation was "irrigation and reclamation". When the CVP was reauthorized by the River and Harbor

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Act of August 26, 1937, the Project purposes were declared to be improvement of navigation, regulating the flow of the San Joaquin River and the Sacramento River, controlling floods, storing water for reclamation, power generation, and other beneficial uses. The act of October 17, 1940 (54 Stat. 1198) again reauthorized the Project to add construction of distribution systems as a Project purpose. The Act of August 27, 1954 (68 Stat. 852) added use of water for fish and wildlife purposes. Although salinity control was considered as a project purpose when the bills were before the Congress, this function was never explicitly set forth in the law. Congressional action on this matter now will put at rest a dispute that has persisted for decades, now, therefore,

BE IT RESOLVED by the Board of Directors of Contra Costa Water District that this Board urges the Congress of the United States to enact legislation that will accomplish the following:

First, declare that one of the purposes of the Federal Central Valley Project is to maintain water quality standards for the Bay-Delta System which are from time to time established by the State Water Resources Control Board consistent with the principles of the Federal Clean Water Act,

Second, authorize the Secretary of the Interior on behalf of the United States to contract with the State of California for the coordinated operation of the Federal Central Valley Project and the State Water Project for the purposes, among

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other things, of maintaining Bay-Delta System water quality standards, maximizing project yields and equitably sharing the burdens of drought and emergency, and

Third, direct the Secretary of the Interior to include in all contracts for a water supply from the Federal Central Valley Project hereafter made or amended an express provision that the water supply shall be subject to the prior Project Obligation of maintaining the water quality standards for the Bay-Delta System.

****

I hereby certify that the foregoing resolution was duly and regularly adopted by the Board of Directors of Contra Costa Water District at a regular meeting thereof held on September 19, 1984, by the following vote:

AYES: Directors Randall, Boatmun, Freitas, Butler, Pellegrini

NOES: None

ABSENT: None

Dated: September 19, 1984.

Janice N. Harski

Janice N. Harski, Secretary
Contra Costa Water District

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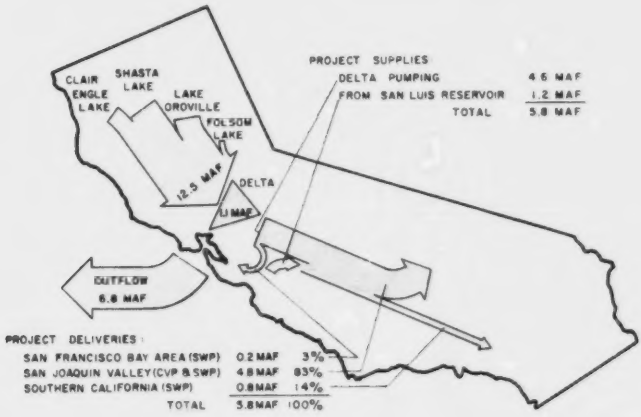
DELTA WATER SUPPLY AND USE - 1981

Water year 1981 (October 1, 1980 through September 30, 1981) was a dry year in the Sacramento River Basin. Natural river inflow to four major storage reservoirs totalled 11 million acre feet (MAF), about 64 percent of the long term average.

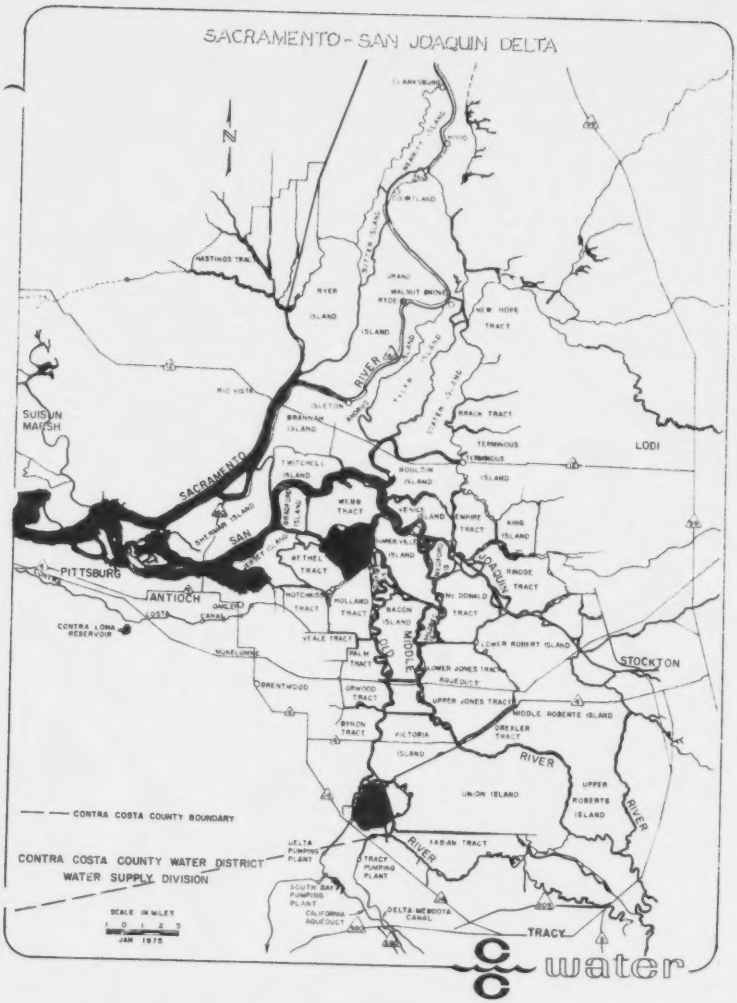
The diagram shows that the Sacramento-San Joaquin Delta received total river inflow of 12.5 MAF during the dry year. The inflow included augmentations of 1.4 MAF released from major storage reservoirs of the Federal Central Valley Project (CVP) and State Water Project (SWP).

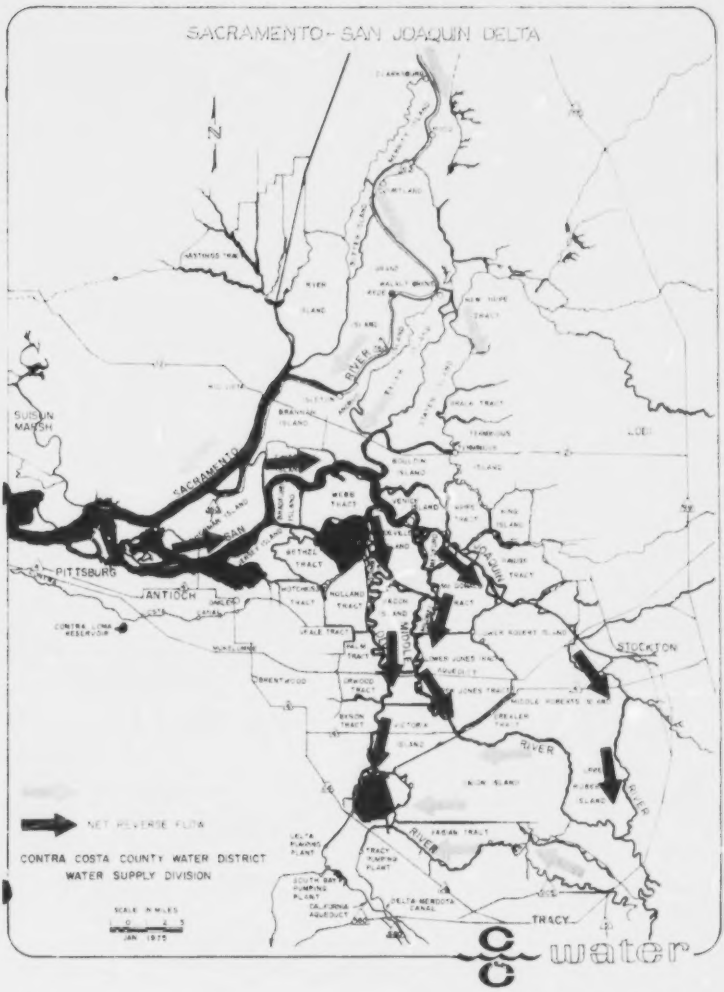


Use of the Delta's 1981 inflow is summarized as follows:

Outflow to San Francisco Bay	6.8 MAF	54 percent of inflow
Water used within Delta	1.1	9
CVP and SWP project pumping	4.6	37
	12.5 MAF	100 percent

The diagram summarizes total CVP and SWP Delta water supplies as well as the projects' deliveries during 1981. Note that the supplies included 1.2 MAF pumped from the Delta before the water year began and stored for later use in San Luis Reservoir, located in the San Joaquin Valley near Los Banos.


SACRAMENTO - SAN JOAQUIN DELTA
N
SUISUN MARSH
SACRAMENTO
SAN JOAQUIN
RIVER
PITTSBURG
ANTIOCH
CONTRA LOMA RESERVOIR
OLD
MIDDLE
RIVER
STOCKTON
LODI
TRACY
BRENTWOOD
MUNICIPAL
CONTRA COSTA COUNTY BOUNDARY
CONTRA COSTA COUNTY WATER DISTRICT
WATER SUPPLY DIVISION
SCALE IN MILES
0 1 2 3
JAN 1975
DELTA PUMPING PLANT
TRACY PUMPING PLANT
SOUTH BAY PUMPING PLANT
CALIFORNIA AQUEDUCT
DELTA MENDOTA CANAL
CCC water


SACRAMENTO-SAN JOAQUIN DELTA
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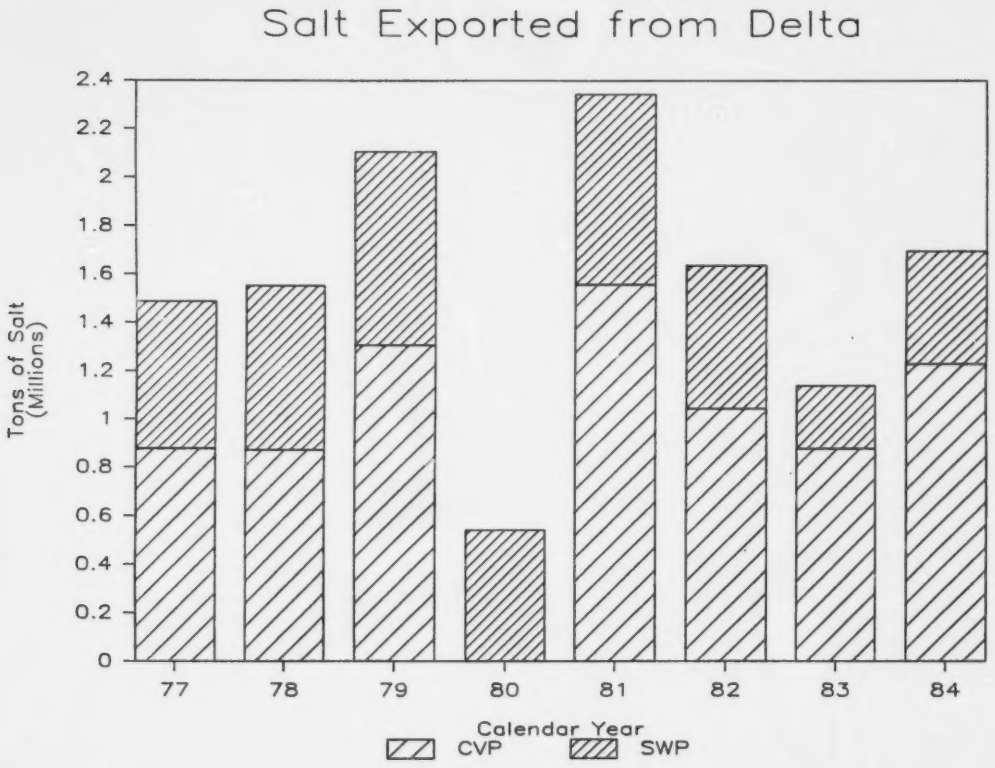
ANTIOCH
CONTRA LOMA RESERVOIR
STOCKTON
TRACY
NET REVERSE FLOW
CONTRA COSTA COUNTY WATER DISTRICT
WATER SUPPLY DIVISION
SCALE IN MILES
JAN 1975
water

SACRAMENTO - SAN JOAQUIN DELTA
N
SUISUN MARSH
SACRAMENTO
PITTSBURG
ANTIOCH
CONTRA COSTA CANAL
LODI
STOCKTON
TRACY
SALINE WATER INTRUSION VIA REVERSE FLOWS TO SACRAMENTO-SAN JOAQUIN DELTA
SALINE-FRESH WATER MIXTURE
CONTRA COSTA COUNTY WATER DISTRICT
WATER SUPPLY DIVISION
water


Salt Exported from Delta
Tons of Salt (Millions)
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
77
78
79
80
81
82
83
84
Calendar Year
CVP
SWP

133

1121 L Street, Suite 1000 · Sacramento, Ca. 95814 (916) 447-7357

state water contractors

Directors
Lowell O. Weeks, *President*
Coachella Valley Water District
Stuart T. Pyle,
Vice President
Kern County Water Agency
James M. Stubchaer,
Secretary-Treasurer
Santa Barbara County Flood Control and Water Conservation District
Ronald R. Esau
Santa Clara Valley Water District
Thomas R. Hurlbutt
Tulare Lake Basin Water Storage District
Eugene H. Knapp
Solano County Flood Control and Water Conservation District
James B. Krieger
Metropolitan Water District of Southern California
Robert C. Sagehorn
Castaic Lake Water Agency
Wallace G. Spinarski
Antelope Valley-East Kern Water Agency

June 5, 1985

Honorable George Miller, Chairman
Subcommittee on Water and Power Resources
House Committee on Interior and Insular Affairs
1522 Longworth Building
Washington, D.C. 20515

Dear Mr. Miller:

I have enclosed my answers to the questions you submitted for my consideration in your letter dated May 24, 1985.

Sincerely,

David Schuster
General Manager

DS:wrs

cc: Mr. David Kennedy, California Department of Water Resources (w/enclosure)
Mr. Richard Shaffer, Central Valley Project contractors' representative (w/enclosure)
Mr. David Houston, U.S. Bureau of Reclamation (w/enclosure)

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June 5, 1985
David R. Schuster

COORDINATED OPERATIONS AGREEMENT

Water Quality

1. Does the agreement as presently drafted provide sufficient assurances that Delta water quality will be protected, at least to the D-1485 level, during a drought?

Answer:

The Coordinated Operations Agreement (COA) guarantees the Delta water quality standards in Exhibit A (D-1485 standards exclusive of the October 1984, Suisun Marsh standards) will be met in any year by the State Water Project (SWP) and the Central Valley Project (CVP) as long as the agreement is not terminated by either party. If the State of California should change the State Delta water quality standards, there is no guarantee the new standards would be met by both projects unless Exhibit A is amended to include these standards. The U.S. Department of Interior (Interior) was not willing to blindly agree to water quality standards which may be established in the future without knowing how those standards might impact the CVP. The State Water Contractors support this position.

If the agreement is terminated under the provisions of Articles 10 or 14, there is no assurance the State mandated Delta water quality standards will be met by the operation of the CVP. If the Federal government should decide to terminate the COA and not meet the Exhibit A standards, they would undoubtedly be taken to court. In my opinion, Interior would have to explain to the court why the CVP was not being operated to meet, as a minimum, the standards Congress had supported when authorizing the execution of the May 20, 1985, COA.

Water Supply

2. Please describe the importance of determining the annual water supplies for each project. Do you have confidence in the SWP and CVP yield estimates?

Answer:

Knowing with some certainty how each project will be operated to meet various water supply obligations is very important to the State Water Contractors. The California Department of Water Resources (Department) can now more accurately estimate the delivery capability of the SWP in various types of years. Since the SWP cannot meet the water supply needs of the contractors during drought periods today and since this problem is expected to occur even in normal water years by the early 1990's, the ability to accurately predict the SWP delivery capability is a must for the contractors. In addition, the Department can better determine the value of future water projects with this COA. Since the water supplies developed by new storage facilities will probably cost the contractors $300 to $400 per acre-foot, being able to accurately determine the benefits and costs of these projects before a decision to construct is made is very important.

The yield estimates are as accurate as technically possible today.

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3. It is often said that implementation of the COA will "make water available" apparently because of the increased efficiencies of the projects. Is this true? How much, if any water will be "freed up" by execution of the COA? Please explain.

Answer:

The COA, a management agreement, cannot develop new water for delivery to the State and Federal contractors. This agreement simply determines how much water is available that is surplus to the needs of the San Francisco Bay, Suisun Marsh, Delta and other area of origin water users. The agreement then divides the surplus water between the two projects.

The answer to this question is really in the answer to question number two. The Department of Water Resources and the Department of Interior are better able to determine the dependable water supplies of the CVP and the SWP now that the COA negotiations are complete. Each found they had more water available on a dependable basis than either had known when the negotiations began. The Department estimated the SWP's 1980 level dependable water supply to be 2.3 million acre-feet prior to the start of negotiations. The SWP's dependable water supply is 2. 5 million acre-feet under the new COA. The Department of Interior estimated, prior to beginning the negotiations, that the CVP's 1920 level dependable water supply was about 7.3 million acre-feet if the D-1485 water quality standards were used and 8.1 million acre-feet if the so-called "Tracy" standards were used. Under the new COA, the CVP's 2020 level dependable supply is estimated at 8.4 million acre-feet with the D-1485 standards.

Both projects were basing important water development decisions prior to the completion of the COA negotiations on bad information.

No new water will be "freed up" by the COA. The SWP's contractual obligation for dependable water supply deliveries totals 4.2 million acre-feet. The increase in existing SWP dependable supply from 2.3 to 2.5 million acre-feet will be used to reduce projected shortages. The increase in CVP water supplies from about 7.3 to 8.4 million acre-feet will be reserved to fulfill Congressional water allocations to the San Luis Unit, the Tehama Colusa Canal service area, and the Folsom-South Canal service area; for possibly maintaining higher than planned minimum fishery releases from Trinity and Folsom Dams; and the remaining supply, if any, would be reserved for the Mid-Valley Canal service area. No new water will be made available on a dependable basis for new or unforeseen Federal or State water supply customers.

Re-authorization

4. The 1937 CVP authorization declares that its facilities "shall be used first for river regulation, navigation and flood control; second for irrigation and domestic uses; and third for power." If water quality is to be a project purpose, where should it be placed in this list of priorities?

Answer:

Interior officials have said for many years that the CVP is not authorized to maintain better Delta water quality than needed by the Federal water contractors served by the Tracy Pumping Plant. Out of frustration, many State officials have argued that the CVP should be reauthorized to make water quality a stated purpose of the CVP.

Each of the project purposes listed in the 1937 Act constitute a service the CVP is providing numerous beneficiaries. Delta water quality is not, in my opinion, a project service but instead a project obligation which must be met before the services listed in the 1937 Act can be provided. The May 20, 1985, draft COA requires Exhibit A water quality standards, other area of origin water needs such as riparian water rights, and minimum fishery releases to be met first prior to determining the amount of water available to the projects for other purposes.

I don't believe the CVP needs to be reauthorized to include water quality as a project purpose. I think that Congressional authorization to execute the COA does obligate the CVP to maintain Delta water quality and places water quality as a primary obligation to be met prior to providing the other authorized services.

However, if we must address the reauthorization as part of the Congressional review of the COA, I am strongly opposed to simply adding water quality to the list of 1937 Act purposes. Instead, Federal law as it pertains to the CVP, should be altered to make it as consistent as possible with California water rights law. This was the goal of all the parties negotiating Article 11 of the COA. One way to do that would be to require, under Federal law, that the CVP be required to maintain water quality in the Delta, San Francisco Bay, and Suisun Marsh that is as good as the quality which would have been available had the CVP not been constructed, provided that level of quality is needed to protect a beneficial use and provided further that maintaining the quality is deemed to be a reasonable use of water.

The State Water Resources Control Board used this logic to establish the D-1485 standards. The Board determined the standards constituted a reasonable use of water after balancing the use of project water for maintaining Delta water quality against the use of that water for delivery to the State and Federal contractors. Under my Federal law proposal, the only difference would be that the Secretary of Interior would be given the right to determine under the "consistency" portion of Article 11, whether the Board correctly balanced the use of CVP water for water quality against water delivery. If he should decide the new standards are inconsistent, the State and Federal governments would go to court to determine whether the State Board had appropriated more water to the Delta than would have been in the Delta in the absence of the CVP, more water than was needed for beneficial uses, and more water than the CVP could provide while still meeting the other Congressionally authorized project purposes. Congressional reauthorization should state that other than obligating the CVP to maintain Delta water quality that would be available in the absence of the project subject to the two provisos discussed earlier, Congress does not intend to confer any additional authority to either the Secretary of Interior or the State Water Resources Control Board.

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In summary, I do not think the CVP needs to be reauthorized to include water quality as a project purpose. If anything is done other than to simply authorize the execution of the COA, Congress should clarify Federal law, consistent with Article 11, in a way that minimizes or eliminates future Federal vs. State disagreements on Delta water quality.

Contracting Issues

5. If water is made available by the CVP to meet Delta water quality standards, should it be done on a non-reimbursable basis? Who would pay if it was done on a reimbursable basis?

Answer:

This issue should be addressed by the Federal contractors, the Department of Interior, and Congress. The State Water Contractors have not taken a position on the issue of reimbursability.

6. The COA provides for a process whereby a contract will be executed for the sale of water from the Federal CVP to the SWP [Article 10(h)]. However, there is no process established for the sale of State Project water to the Federal CVP. Shouldn't there be such a provision?

Answe :

No - The SWP's dependable water supply is less than the needs of the SWP contractors and less than the SWP's contractual obligation to the contractors. The SWP will not have surplus dependable water available for sale to the CVP in the foreseeable future.

Drought

7. Please describe experiences that took place during the drought of 1977-78.

Answer:

Please see the Department of Water Resources bulletin entitled "The 1976-77 California Drought - A Review" dated May, 1978.

Highlights from my own memory include:

- The CVP and SWP were operated to maintain the State Water Resources Control Board's 1975 Basin Plan Water Quality standards through September 1976 except for a short period during July.
- The 1971 draft COA was used to coordinate operations.
- Both projects delivered a full supply to their contractors in 1976.
- The SWP delivered surplus water to its contractors in 1976.

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- The CVP delivered interim water to the Westlands Water District in 1976.

- In October the Bureau of Reclamation (Bureau) determined that if 1977 was a dry year and if the two projects continued to meet the Basin Plan water quality standards, the ~~two~~ projects would run out of water in early May, 1977, even with zero water going to the ~~two~~ projects respective contractors.

- The Bureau cut back to the "Tracy" standards in October 1976. The State operated the SWP to meet the Basin Plan standards for a short period and then backed off to the "Tracy" standards with the Bureau.

- In early 1977, the Bureau decided the CVP could not fully meet the "Tracy" standards and relaxed that quality objective even further.

- The State Board relaxed the State Basin Plan standards in February and June to match the Bureau's water quality objectives.

- The Bureau delivered a 75% supply to its water rights users as required by their contracts in 1977. All other agricultural water users received a 25% supply. The CVP municipal water contractors were cut 25 to 50% depending on individual contracts.

- The SWP agricultural water deliveries were reduced by 60% and the municipal water users 10% in 1977.

- The Metropolitan Water District (MWD) relinquished its right to SWP water in 1977 and as a substitute diverted more water from the Colorado River. MWD's voluntary act made 400,000 acre-feet available to the SWP agricultural water users and greatly reduced the effects of the drought.

- All CVP and SWP reservoirs were at, or nearly at, minimum storage levels in October 1977. If 1978 had not turned wet as it did in January, the people of California would have been in big trouble.

8. How were contractors and the Delta affected by project operations during this drought?

Answer:

For affect on the contractors, see answer to question 7. The Delta received rather good, almost normal, water quality through September 1976. When the Bureau and the State reduced their water quality objectives to the Tracy standards, the quality in the Delta began to degrade dramatically. The Delta agricultural water users, municipal water users, and fish and wildlife had very poor water quality throughout 1977. The quality was so poor that the Contra Costa County Water District had to move its intake in the Delta, looking for better quality. Contra Costa also received good quality water from the East Bay Municipal Water District for blending with the poor quality Delta water. In summary, 1977 was a bad year for the Delta water users, Delta fish and wildlife, and the State and Federal water contractors.

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For affect on the contractors, see answer to question 7. The Delta received rather good, almost normal, water quality through September 1976. When the Bureau and the State reduced their water quality objectives to the Tracy standards, the quality in the Delta began to degrade dramatically. The Delta agricultural water users, municipal water users, and fish and wildlife had very poor water quality throughout 1977. The quality was so poor that the Contra Costa County Water District had to move its intake in the Delta, looking for better quality. Contra Costa also received good quality water from the East Bay Municipal Water District for blending with the poor quality Delta water. In summary, 1977 was a bad year for the Delta water users, Delta fish and wildlife, and the State and Federal water contractors.

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The D-1485 standards require much less project water to maintain than the 1975 Basin Plans did. Studies show that this fact, when coupled with a more conservative operating scheme in 1976, and the new COA would allow the two projects to meet the D-1485 standards throughout a reoccurrance of the 1976-77 drought while delivering more water to the two projects respective contractors. The CVP would only have to cut their water users by 50% in 1977 and not 75% as actually occurred. I'm not sure how much water the SWP could deliver in 1977. MWD could not revert back to the Colorado River as they did in 1977 because their right to that water will be reduced this year when the Central Arizona Project goes on-line. Therefore, a reoccurance of 1976-77 would probably have an even more serious impact on the SWP agriculture contractors than actually occurred in 1976-77.

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ENVIRONMENTAL DEFENSE FUND

2606 Dwight Way
Berkeley, CA 94704
(415) 548-8906

June 6, 1985

Hon. George Miller
Chair, House Subcommittee
on Water and Power Resources
2422 Rayburn House Office Building
Washington, D.C. 20515

Dear Congressman Miller:

What follows are EDF's answers to the questions you posed in your letter to me of May 24 regarding the Coordinated Operations Agreement.

Water Quality

1. Q. Does the agreement as presently drafted provide sufficient assurance that Delta water quality will be protected, at least to the D-1485 level, during a drought year?

A. The agreement, as written, does appear to commit the Bureau of Reclamation to meeting the D-1485 standards (in conjunction with the Department of Water Resources). However, the agreement is subject to unilateral cancellation in the not very distant future. It is also probable that, during a future drought (as was the case in 1977-78, the second year of California's most recent severe drought), standards such as those incorporated in D-1485, would be relaxed by order of the State Water Resources Control Board.

Re-authorization

2. Q. The 1937 CVP authorization declares that its facilities "shall be used first for river regulation, navigation and flood control; second for irrigation and domestic uses; and third for power." If water quality is to be a project purpose, where should it be placed in this list of priorities?

A. If the CVP is to be reauthorized in new legislation, water quality and fish and wildife protection should at least be equal in priority to the explicit purposes set out in the 1937 CVP act. In practical terms, this should mean that the CVP's sale of water and power will be subject to meeting water quality and fish and wildlife protection constraints established by the SWRCB and approved by EPA.

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3. Q. If the CVP authorization is amended to make water quality a project purpose, does this mean that we are initiating a new 50-year repayment period?

A. Any legislation reauthorizing the CVP should explicitly address its impact on repayment terms for the CVP, preferably in the legislation itself, with clearly drafted legislative history an inferior alternative. Ideally, the legislation should establish a firm repayment schedule for the CVP that recovers federal costs on a systematic and fair basis, consistent with sound accounting principles. To handle the problem of existing CVP contracts which are inconsistent with such a repayment schedule, the legislation should forbid the Bureau from providing the recalcitrant contractors with any discretionary benefits, including the delivery of interim water. The legislation should also firmly establish the principle that upon contract expiration, contractors will be allowed to renew their contracts only if they commit themselves to making up the costs which they had previously avoided, in an explicitly defined systematic and timely fashion.

Contracting Issues

4. Q. If the agreement is approved by Congress, does the responsibility for meeting Delta water quality standards fall on future contractors only, or does it fall on all existing and future contractors?

A. For the COA to be meaningful, that portion of the responsibility for meeting Delta standards, which is the responsibility of the United States, will perforce then be borne by all Bureau contractors. Currently the Bureau has a formula for distributing water shortages which applies equally to all within certain classes of customers, agricultural and municipal. Whether this policy should be changed if and when the Bureau signs contracts for "new" water is a matter primarily for the Bureau to resolve with its contractors, existing and future. Theoretically, it makes no difference to the Delta in what proportion various contractors take shortages, if the Delta is assured that the Bureau will meet specified Delta standards. Practically, however, until the Bureau is fully committed to meeting Delta and Bay standards now and in the future, no new commitments for exporting Bureau water from the Delta should be allowed to occur.

5. Q. If water is made available by the CVP to meet Delta water quality standards, should it be done on a non-reimbursable basis? Who would pay if it was done on a reimbursable basis?

A. Water made available by the CVP to meet Delta and Bay standards should be reimbursable by its contractors to the extent it can fairly be described as mitigation for the effects of the CVP's operations on the Delta and Bay. If enhancement benefits are provided to Delta and Bay uses, they should be reimbursed by Delta and Bay users. New federal taxpayer subsidies beyond those already embedded in the CVP Act and generic reclamation legislation should be discouraged.

6. Q. Do you believe Article 11 will insure that the Federal government will do its share to meet Delta water quality standards now and in the future?

A. Article 11 does not provide assurance that the U.S. will meet Delta standards in the future. It does provide reasonable assurance that it will meet such standards for the next 4-5 years.

Drought

7. Q. Please describe experiences that took place during the drought of 1977-78.

A. In 1976-77, the Department of Water Resources released approximately 200,000 acre feet of water, beyond what the Bureau was willing to provide in accordance with their then operative annual agreement, for Delta water quality protection. This resulted in several lawsuits by state contractors and their sub-contractors charging the State with illegally having given away stored water to which they had rights. These suits were recently settled inconclusively, so that the legality of DWR's 1976-77 operations is still uncertain. During the same year DWR also delivered about 200,000 acre feet of "surplus" water to its agricultural contractors.

In 1977-78, the SWRCB relaxed Delta standards for both the SWP and CVP and both projects substantially cut back on their deliveries to their contractors, as well as to the Delta. Surprisingly, most areas did not suffer losses commensurate with the severity of the cutbacks, because they had alternative supplies to fall back on or could adopt various conservation measures. Delta and Bay fisheries,

however, have still not recovered to pre-drought levels, even though several of the years since 1977-78 have been extraordinarily wet.

Also in 1977-78, both projects made efforts to promote water trading from areas of relative excess to areas of need and each responded quite creatively to severe drought-related problems in Marin County (SWP) and in the EBMUD service area (CVP) respectively.

Had 1978-79 also been a dry, or worse yet a critical, year, many even more severe problems would likely have arisen, both in the Delta and in project service areas.

8. Q. How were contractors and the Delta affected by project operations during this drought?

A. See answer to (Q) 7. Also, Delta consumptive water supplies were substantially degraded in quality.

I hope these answers sufficiently respond to your questions. Please do not hesitate to seek clarification or otherwise to follow up on any issues raised by our answers.

Sincerely yours,

Thomas J. Graff
Senior Attorney

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RICHARD L. SCHAFER, RCE 12616
DUANE T. CALL, RCE 19683

June 3, 1985

The Honorable George Miller,Chairman
Subcommittee on Water and Power Resources
1522 Longworth House Office Building
Washington, D.C. 20515

Dear Congressman Miller:

With reference to your letter of May 24, 1985, we have the following responses to your questions:

Water Quality

Q. Does the agreement as presently drafted provide sufficient assurances that Delta water quality will be protected, at least to the D-1485 level, during a drought year?

A. Yes, the COA provides assurance that Delta water quality will be protected to the Exhibit A (D1485) standards. The premise under which the Exhibit A (D1485) standards were developed by the State Water Resources Control Board was to provide water quality in the Delta at a level better than that which existed historically under pre-project conditions. The relaxation allowed in the standards applicable during the dry and critical year classification establishes the protection for a drought year.

Re-authorization

Q. The 1937 CVP authorization declares that its facilities "shall be used first for river regulation, navigation and flood control; second for irrigation and domestic uses; and third for power." If water quality is to be a project purpose, where should it be placed in this list of priorities?

A. It is our opinion the Delta water quality requirements set forth under Exhibit A (D1485) of the COA provide a paramount or first priority to other CVP authorized purposes.

However, should the Delta water quality requirements be made a general project purpose without any limiting standards, then it seems to us the priority would fall to the fourth position. Therefore, the legislation should be limited to execution and implementation of the COA with its incorporated Exhibit A standards.

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We believe the Exhibit A (D1485) standards provide more protection for water quality in the Delta than occurred under pre-project conditions, and result in a number one priority which would continue even with an amendment so long as operation of the project in accordance with the amendment would not conflict with congressional directives.

Contracting Issues

Q. If water is made available by the CVP to meet Delta water quality standards, should it be done on a non-reimbursable basis? Who would pay if it was done on a reimbursable basis?

A. Yes, the CVP water required to meet the Delta water quality standards, Exhibit A (D1485) should be made a non-reimbursable cost (construction and annual OM&R costs), similar to other non-reimbursable functions. As previously submitted to you by letter dated May 24, 1985, the GAO, by letter dated January 18, 1982, determined meeting the Delta water quality standards (D1485) would deplete the CVP yield by 800,000 acre-feet over and above the water required to meet the CVP's water quality standards at the Tracy Pumping Plant. Therefore, the costs associated with the CVP water allocated for Delta water quality should be made a non-reimbursable cost (construction and annual OM&R costs) and a commensurate reduction of cost allocation to irrigation and M&I water supply should be made.

Q. The COA provides for a process whereby a contract will be executed for the sale of water from the Federal CVP to the SWP (Article 10(h)). However, there is no process established for the sale of State Project water to the Federal CVP. Shouldn't there be such a provision?

A. Since the State Water Project has a projected deficit of nearly two million acre-feet, it is unlikely that any SWP water would be available for sale from the State Water Project to the Federal Central Valley Project. Therefore, we consider the sale of SWP water to the CVP to be an unrealistic situation that need not be covered by the COA.

Drought

Q. Please describe experiences that took place during the drought of 1977-1978.

Q. How were contractors and the Delta affected by project operations during this drought?

A. We believe the Bureau of Reclamation and the Department of Water Resources can better answer these questions as our direct

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operations are somewhat removed from the Delta. The State of California published a report "The California Drought-1977" with updates which should provide a reference for your questions. We may, however, state that the full shortage or reduction of deliveries as allowed in the contracts were effected by the Bureau of Reclamation during the 1976 and 1977 drought.

We appreciate the opportunity of providing additional input on the COA prior to closing the record. Again, as stated in the May 23rd hearing, the Federal authorization for execution and implementation of the COA should provide, if required, the re-examination of CVP cost allocations to allow the cost associated with the water allocation for Delta water quality to be a non-reimbursable CVP cost.

Very truly yours,

R. L. Schafer

RLS/dc

cc: Congressman Tony Coelho
Congressman Richard Lehman
Congressman Charles Pashayan, Jr.
Michael Catino
Kenneth Kuney
Jeff Taylor

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water
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JOHN E. DeVITO, GEN. MGR.
JOHN S. GREGG, ASST. GEN. MGR.

June 5, 1985

Congressman George Miller
2422 Rayburn Building
Washington, D.C. 20515

Dear George:

There is attached, my response to your questions of May 24, 1985. These answers were prepared with the assistance of Frederick Bold, Jr. and Harvey O. Banks, CCWD's General Counsel and General Engineering Consultant, respectively.

In addition, please recall my testimony of Thursday, May 23, 1985, at which time I pointed out that under the late Senator George Miller, Jr.'s legislation, Section 12202 of the California Water Code, there is yet no Congressional directive that will authorize the USBR to participate with the State of California in replacing the Bureau's share for off-shore water supply impairments due to CVP operations.

Therefore, may I respectfully suggest that the CVP Act should be amended so as to authorize the USBR to compensate water users in the Sacramento/San Joaquin Delta for dimunition of their water supply as a proximate result of operations of the CVP. The State compensates for reductions of availability of water resulting from its operation of the State Water Project.

Thank you for inviting us to participate and be assured of our continued support and cooperation.

Sincerely yours,

John E. DeVito
General Manager

JED:jnh

Attachments

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CCWD'S ANSWERS TO CONGRESSMAN GEORGE MILLER'S LETTER OF MAY 24, 1985

1. Does the agreement as presently drafted provide sufficient assurances that Delta water quality will be protected, at least to the D-1485 level, during a drought year?

   No assurances, allow me to elaborate.

   In summary, Article 11 provides:

   1. CVP and SWP will operate to meet current Delta standards, which are listed in the agreement.

   2. If the standards are changed, and the Secretary of the Interior determines the new standards are consistent with Congressional authorization, the COA will be modified accordingly.

   3. If the Secretary determines the new standards are inconsistent with Congressional authorization, he will request the Department of Justice to bring legal action to determine the applicability of the new standards of the CVP.

   Although in Delta Decision 990 (USBR/CVP Permit of 1960) and again in Delta Decision 1485, the SWRCB retained jurisdiction from time to time to review and change standards; Article 11 appears to negate the Board's right to retain jurisdiction for the express purpose of improving the standards. Furthermore, Article 11 appears to subordinate the SWRCB jurisdiction to a "no win" U.S. justice determined Federal vs. State's rights process.

   As I stated on May 23, 1985, in my opinion, this provision of Article 11 along with Article 14-b are "built in self-destruct provisions" that must be eliminated by appropriate Congressional action.

   SWRCB has started the process of formulating future San Francisco Bay/Sacramento-San Joaquin Delta Estuary flow and salinity standards to protect prior water rights and beneficial uses within the Bay-Delta Estuary. Public input through workshops is sought. Formal hearings are now scheduled to start in late 1986. The extent to which the D-1485 Delta standards might be revised and improved cannot be projected.

   However, I also stated in my testimony of May 23rd, it is anticipated that Decision 1485 which is "interim, incomplete and inadequate", will be modified with improved Delta Standards as well as expanded to include Suisun Marsh and San Francisco Bay Standards, during the two year reopening process which commences in 1986.

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It is noted that during the 1976-77 drought, SWRCB relaxed the previously applicable Delta standards on a temporary basis because of the critical shortage of water available from CVP and SWP. This could be done again in event of a severe drought of extended duration.

2. The 1937 CVP authorization declares that its facilities "shall be used first for river regulation, navigation and flood control; second for irrigation and domestic uses; and third for power." If water quality is to be a project purpose, where should it be placed in this list of priorities?

"Water quality control" should be a first priority project purpose and inserted in the above listing of priorities immediately after "river regulation". The rationale is that river regulation is needed for the water quality control required to provide adequately for the second priority "irrigation and domestic uses".

3. If water is made available by the CVP to meet Delta water quality standards, should it be done on a non-reimbursable basis? Who would pay if it was done on a reimbursable basis?

The CVP costs allocated to meeting water quality standards established for the protection and enhancement of fish, wildlife and recreation should be non-reimbursable because the users and beneficiaries are widespread and not readily identifiable. Mitigation costs should be reimbursable by the users of CVP water and power. This is in accord with the policies of the State of California.

When water is requested and released from CVP reservoirs above and beyond water rights and historical entitlements and specifically for needed water quality improvement for the economic benefit of agricultural, municipal and industrial water users not now CVP contractors, who divert directly from the Delta, the users benefited should be required to reimburse the United States for the value of the CVP water so released.

It is important to note that the State Department of Water Resources and the North Delta Water Agency have recently executed a contract under which the Agency will reimburse the State for agricultural benefits received from SWP operations.

When the release from upstream storage is made in order to meet Delta water quality standards established to protect uses other than agriculture, municipal and industrial uses, those agricultural, municipal and industrial users who are incidentally benefited by quality improvement should not be charged for such improvement.

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4. Please describe experiences that took place during the drought of 1977-78.
5. How were contractors and the Delta affected by project operations during this drought?

These two questions are being answered together because of the relationship between the effects on water users in and from the Delta and the experiences and action related to project operations.

The Fall of 1976 found the projects stored water significantly below normal and the operating agencies, DWR and USBR, speculating as to water supply availability in the forthcoming 1977 winter. This lack of predictive and operational tools was demonstrated by the fact the Bureau of Reclamation did not establish water availability to the contractors until late March 1977. At that time, CVP water was allocated under prevailing contract provisions. CVP agricultural contracts were reduced 75%, while M & I contracts were reduced by 50%. DWR and the SWRCB reduced supplies available under contract and water rights.

The water shortage experienced by CCWD in 1977 had a material impact on the operating costs of major industries and upon the consumers within the municipal service area. The impacts were most apparent in the loss of landscaping and in the human energy devoted to primitive water conservation techniques. In addition to the reduction in available supplies with attendant financial impact on the end user, the water quality impacts were material, ranging from thousands of dollars per day for additional energy and chemicals at industrial plants to the cost of bottled water among home owners.

During the early period of 1977, the SWRCB in a series of hearings, finally relaxed Delta water quality standards to reduce the required outflow, both for immediate water supply considerations and because of a growing fear that control of Delta water quality would be lost if significant storms did not appear in the early winter of 1977. The State Board's actions included approval of rock barriers, which together with the emergency Middle River pumping stations on the Mokelumne Aqueduct provided a balance of water quality and quantity for Delta developed operations. During the late Summer and Fall of 1977, the DWR developed an emergency plan to attempt to save the Delta from uncontrolled salinity intrusion.

Decision 1485 was designed to reduce risks and to be more sensitive to the extreme variation in water years, including droughts like 1976-77. Detailed summaries on the impact of the drought are available in publications of the Department of Water Resources, including DWR Bulletin 168.

AGREEMENT

BETWEEN

THE UNITED STATES OF AMERICA

AND

THE DEPARTMENT OF WATER RESOURCES OF

THE STATE OF CALIFORNIA

FOR

COORDINATED OPERATION

OF THE

CENTRAL VALLEY PROJECT

AND THE

STATE WATER PROJECT

(This coordination agreement suspends the agreement of May 16, 1960, between the United States and the State of California.)

United States of America
Department of the Interior
Bureau of Reclamation
Central Valley Project
California

State of California
The Resources Agency
Department of Water Resources
State Water Project

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No. 14-06-200-8363

AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF CALIFORNIA FOR COORDINATED OPERATION OF THE CENTRAL VALLEY PROJECT AND THE STATE WATER PROJECT

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Exhibits

A	Standards for the Sacramento-San Joaquin Delta
B-1	Central Valley Project and State Water Project Annual Supplies
B-2	Central Valley Project and State Water Project Full Development Annual Supplies
C	Monitoring Locations
D	Exchange Procedure to Provide D-1485 Condition 3 Replacement Water (Article 10b of COA)
E	Water Shortage and Apportionment

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AGREEMENT BETWEEN
THE UNITED STATES OF AMERICA
AND
THE DEPARTMENT OF WATER RESOURSES OF
THE STATE OF CALIFORNIA
FOR COORDINATED OPERATION OF THE
CENTRAL VALLEY PROJECT AND THE STATE WATER PROJECT

1. THIS AGREEMENT, made the _____ day of _____, 198__, pursuant to the Act of Congress approved _____, P.L. _____, and pursuant to the California Central Valley Project Act, which is Part 3, Division 6 (commencing at Section 11100) of the California Water Code, and the California Water Resources Development Bond Act, Chapter 8, Part 6, Division 6 (commencing at Section 12930) of the California Water Code, between THE UNITED STATES OF AMERICA, herein called the United States, acting through the Bureau of Reclamation, Department of the Interior, represented by the Contracting Officer executing this agreement, and THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF CALIFORNIA, herein called the State, represented by the Director of Water Resources.

EXPLANATORY RECITALS

2. The United States has under construction and is operating the Central Valley Project, California, for the

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development, conservation, control, and utilization of water resources in California.

The State has under construction and is operating initial facilities of the State Water Resources Development System, herein called the State Water Project, for the development, conservation, control, and utilization of water resources in California.

The United Sztes and the State entered into an agreement on May 16, 1960, Article 16 of which recognizes the need for criteria for the coordinated operation of the Central Valley Project and the State Water Project.

Certain basic assumptions of that agreement require modification in light of subsequent developments and changes in the two projects.

The United States and the State had prepared a May 13, 1971, Draft Agreement which would have supplemented the Agreement of May 16, 1960.

The United States and the State have in the past been operating under annual letter agreements implementing the May 13, 1971, Draft Agreement.

The United States and the State by entering into this agreement will suspend the Agreement of May 16, 1960; but it is recognized that the legal positions of the parties regarding any interpretation of the terms of said agreement are preserved.

--Article 2--

The United States and the State will observe reservoir operational criteria prescribed by the United States Corps of Engineers to minimize flood hazards.

The United States and the State each plans to meet all requirements and objectives of its project and to coordinate the operation of their projects so as not to adversely affect the rights of other parties and to conserve water.

The State and the United States intend to build additional water storage and transportation facilities.

Both the United States and the State have, pursuant to applications filed with the State Water Resources Control Board (formerly State Water Rights Board), received permits for appropriation of unappropriated water in furtherance of their respective projects.

It is in the best interest of the United States and the State to agree on the use of water rights as set forth in this agreement rather than litigate such uses as between the two projects and potentially all other water users in the Central Valley of California.

Both the State and the United States are dedicated to utilizing their existing and future water conservation

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facilities so as to provide the maximum benefits to the people of California and the Nation and believe that through the coordinated and cooperative operation of State and Federal facilities, these benefits can be maximized.

NOW, THEREFORE, it is agreed:

DEFINITIONS

3. When used in this agreement, the following shall have the meanings hereinafter set forth:

(a) "Sacramento Valley inbasin uses" are legal uses of water in the Sacramento Basin including the water required under the provisions of Exhibit A.

(b) "Balanced water conditions" are periods when it is agreed that releases from upstream reservoirs plus unregulated flow approximately equal the water supply needed to meet Sacramento Valley inbasin uses, plus exports.

(c) "Excess water conditions" are periods when it is agreed that releases from upstream reservoirs plus unregulated flow exceed Sacramento Valley inbasin uses, plus exports.

(d) "United States storage withdrawal" is the sum of "Whiskeytown storage withdrawal" which is the positive daily mean flow computed by subtracting the daily mean local inflow to Whiskeytown Lake (total inflow excluding the flow through the Judge Francis Carr Powerplant) from the sum of the daily mean diversions from (i) Whiskeytown Lake to Spring Creek Powerplant, (ii) the Whiskeytown Dam releases to Clear

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Creek, and (iii) measured water deliveries from Whiskeytown Lake; and the positive sum of:

(1) "Shasta storage withdrawal" which is the daily mean flow computed by subtracting the sum of (i) the daily mean inflow into Shasta Lake and (ii) the daily mean discharge from Spring Creek Powerplant from the sum of (i) the Keswick Dam releases to the Sacramento River and (ii) measured water deliveries from Shasta and Keswick Lakes; and

(2) "Folsom storage withdrawal" which is the daily mean flow computed by subtracting the daily mean inflow into Folsom Lake from the sum of (i) Nimbus Dam releases to the American River, (ii) Nimbus Dam diversions to Folsom South Canal, and (iii) measured water deliveries from Folsom Lake and Nimbus Lake.

(e) "State storage withdrawal" is the value calculated in 3(e)(1) except when specifically declared by the State that Upper Feather storage withdrawals are being made in which case "State storage withdrawal" is the sum of 3(e)(1) and (2).

(1) "Oroville Complex storage withdrawal" is the positive daily mean flow computed by subtracting the sum of the daily mean inflow into Lake Oroville and the daily mean discharge from Kelly Ridge Powerplant from the sum of the daily mean diversions at or into the following facilities:

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Palermo Canal, Thermalito Diversion Dam to Feather River, Thermalito Diversion Dam to Hatchery, Diversion Structures for Butte County, Thermalito Irrigation District Diversion Structure, Richvale Canal, Western Canal, Pacific Gas and Electric Company's Lateral, Sutter Butte Canal, and the Thermalito Afterbay Outlet to Feather River.

(2) "Upper Feather River storage withdrawal" is the positive daily mean flow computed by subtracting the sum of the daily mean flow into Lake Davis and Antelope Reservoir from the sum of the daily mean releases from these reservoirs.

(f) "Export" means diversions by the United States and the State through export facilities specified in subarticle 5(b).

(g) "United States stored water" is the net increase in daily storage in Shasta Lake and Folsom Lake.

(h) "State stored water" is the net increase in daily storage in Lake Oroville and, when declared by the State, the net increase in daily storage in the Upper Feather River reservoirs.

(i) "Delta" means the Sacramento-San Joaquin Delta as described in California Water Code §12220 (Stats. 1959, C. 1766, p. 4249, § 1).

(j) "New Delta standards" are any Delta standards different from those set forth in Exhibit A.

TERM OF AGREEMENT

4. This agreement shall remain in full force and effect until terminated either by the mutual consent of the parties or as provided in subarticles 10(h), or 14(b).

FACILITIES

5. This agreement recognizes the following facilities as presently existing:

(a) Reservoirs:

United States	State
Shasta Lake	Lake Oroville
Keswick Reservoir	Thermalito Forebay
Clair Engle Lake	Thermalito Afterbay
Lewiston Lake	Thermalito Diversion Dam Reservoir
Whiskeytown Lake	San Luis Reservoir (Joint)
Folsom Lake	O'Neill Forebay (Joint)
Lake Natoma	Lake Davis
San Luis Reservoir (Joint)	Antelope Lake
O'Neill Forebay (Joint)	Lake Del Valle
	Pyramid Lake
	Castaic Lake
	Silverwood Lake
	Lake Perris
Millerton Lake	
New Melones	

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(b) Export facilities:

United States	State
Contra Costa Pumping Plant #1	Harvey O. Banks Delta Pumping Plant, including Clifton Court Forebay
Tracy Pumping Plant	

COORDINATION OF OPERATIONS

6. (a) This agreement was negotiated on the basis of annual supplies reflected in Exhibit B. It is agreed that:

(1) The computations described in this article shall be the basis upon which the United States and the State shall coordinate the operations of the Central Valley Project and the State Water Project facilities specified in Article 5 in order to meet Sacramento Valley inbasin uses and maintain the respective annual water supplies specified in Exhibit B-1, or as that exhibit is revised in accordance with subarticle 6(a)(3);

(2) Nothing in this agreement shall constrain either party from moving toward full utilization of its facilities at any time;

(3) As either party proceeds toward the full utilization of its project, any changes in the underlying assumptions with respect to the development of the two projects and the demands for water from each project will be reflected by recomputing the annual water supplies specified

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in Exhibits B-1 and B-2 in accordance with the provisions of subarticle 14(a). The methodology described in the document entitled "Technical Report on Determination of Annual Water Supplies for Central Valley Project and State Water Project," dated March 1984 will be used to recompute the annual water supplies and to revise, if necessary, the factors and procedures contained in this article.

(b) Determination of Sacramento Valley Inbasin Use of Storage Withdrawals and Unstored Water for Export: During period of balanced water conditions, daily computation shall be made to determine the difference between (i) the sum of the United States and State storage withdrawals adjusted for time of travel to the export facilities specified in subarticle 5(b), and (ii) the sum of the United States and State exports. If total storage withdrawals exceed total exports, the difference represents Sacramento Valley inbasin use of storage withdrawals. If total exports exceed storage withdrawals, the difference represents unstored water for export.

(c) Sharing of Responsibility for Meeting Sacramento Valley Inbasin use With Storage Withdrawals During Balanced Water Conditions: Each party's responsibility for making available storage withdrawals to meet Sacramento Valley

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inbasin use of storage withdrawals shall be determined by multiplying the total Sacramento Valley inbasin use of storage withdrawals by the following percentages:

United States	State
75	25

(d) Sharing of Responsibility During Balanced Water Conditions When Unstored Water for Export is Available: Each party's responsibility to meet Sacramento Valley inbasin use and exports shall be determined by:

(1) Allocating the sum of United States stored water, State stored water and the unstored water for export by the following percentages:

United States	State
55	45

(2) If the daily sum of United States stored water and unstored water for export is greater than the United States share as allocated in 6(d)(1), then the United States is obligated, except when either subarticle 6(h) or 6(i) is in effect, to provide water to the extent that its daily sum is greater than its allocated share.

(3) If the daily sum of United States stored water and the unstored water for export is less than its share as allocated in 6(d)(1) then the State is obligated, except when either subarticle 6(h) or 6(i) is in effect, to

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provide water to the extent that the State's daily sum of State stored water and unstored water used for export is greater than its allocated share.

(e) Accounting of Accumulated Responsibilities: During balanced conditions, except when either subarticle 6(h) or 6(i) is in effect, the daily obligation as defined in subarticle 6(c) or 6(d) shall be accumulated. The accumulation in effect when balanced conditions end shall remain in force and resume when balanced conditions are again declared. At the request of either party, the accumulation will be reduced or eliminated within a reasonable time. Otherwise, the accumulation shall continue until the agency that has the positive accumulation (has released more water than its defined responsibility) goes into a flood control operation. A flood control operation occurs when the actual storage exceeds the defined flood control permissible storage at Oroville Reservoir for the State or Shasta Reservoir for the United States. The flood control operation at Folsom Reservoir will not affect this provision because of its limited conservation storage.

(f) Changes in Sacramento Valley Inbasin Use During Balanced Conditions: If the Sacramento Valley inbasin use changes, upstream reservoir releases and/or exports will be modified based on the current accumulation identified in subarticle 6(e) and/or the daily share of responsibility computed in subarticles 6(c) and 6(d).

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(g) Responsibilities During Excess Water Conditions: During excess water conditions each party has the responsibility to export and store as much water as possible within its physical and contractual limits.

(h) Availability of Storage Withdrawals to the Other Party: Unless otherwise agreed, whenever a party's storage withdrawal available for export is greater than its export capability, the difference shall be available for export by the other party without affecting either party's future responsibility for providing storage withdrawals to meet Sacramento Valley inbasin use.

(i) Availability of Unstored Water for Export to the Other Party: Unless otherwise agreed, whenever a party's share of unstored water for export exceeds its exports, the unusable portion is available for export by the other party without affecting either party's daily sum of stored water.

FORECASTING

7. Upon request, each party shall prepare and furnish to the other a forecast of its proposed operation related to the facilities specified in Article 5. The forecast shall indicate the flow available for export, storage withdrawals, and Sacramento Valley inbasin use. The forecasts shall be prepared and exchanged so as to allow sufficient time for the preparation of consolidated forecasts.

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WATER MEASUREMENT RESPONSIBILITIES

8. The United States and the State, each at its own expense, shall install and maintain measuring and recording devices at its facilities specified in Article 5.

(a) Each party shall measure or compute and record daily, or at such other intervals as may be agreed upon, and provide to the other party the rates and quantities of water that will show the (1) estimated inflow to its reservoirs, (2) net releases from its reservoirs, (3) stage and change in storage of its reservoirs, (4) net amount of evaporation at its reservoirs, (5) diversions through its export facilities, and (6) its storage withdrawals.

(b) The measuring and recording devices shall be examined, tested, and serviced regularly to assure their accuracy. At any reasonable time either party may inspect the measuring and recording devices of the other party. Immediate action shall be taken to correct any deficiencies noted in such inspections. Accuracy in measurements of export diversions and releases from reservoirs shall be within commonly accepted engineering standards. All computations and correlations shall be calculated in a manner acceptable to both parties.

REDUCTION IN UNITED STATES AND STATE EXPORTS

9. If any forecast indicates that either the United States or the State, or both, will be unable to meet the anticipated demands of its water users during the balance of

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the calendar year, representatives of the United States and the State shall confer on possible procedures for making joint operational changes to minimize the shortage. If agreement cannot be reached on a joint procedure for minimizing the threatened shortage, the United States and the State each shall be entitled to export the amount of water available to it according to calculations made pursuant to Article 6, and each party shall assess against its users such reductions as it deems necessary or appropriate.

EXCHANGES, CONVEYANCE, AND PURCHASES OF WATER SUPPLY

10. (a) Either party may make use of its facilities available to the other party for pumping and conveyance of water by written agreement.

(b) To the extent that operational constraints are imposed on the Central Valley Project by Exhibit A to minimize diversions of young striped bass from the Delta during May and June, which reduce Central Valley Project exports, the State will transport up to 195,000 acre-feet of Central Valley Project water through the California Aqueduct Reaches 1, 2A, and 2B no later than April 30 of the following year by direct diversion or by rediversion of stored Central Valley Project water at times that diversions do not reduce State Water Project yield.

The State agrees to transport this water subject to the following:

(1) The United States will supply power according to Exhibit D;

(2) During critical water supply years, as defined by D-1485, the State shall pump the water during Central Valley Project off-peak hours (10:01 p.m. to 6:59 a.m. Monday through Saturday and all day Sunday and national holidays);

(3) In all other water supply years, to the extent possible as determined by the State, pumping of this water shall be provided during Central Valley Project off-peak hours;

(4) The United States shall reimburse the State for incremental costs for pumping Central Valley Project water through the facilities specified in this subarticle. Incremental costs are those costs which if not reimbursed by the United States would otherwise cause increased charges to State Water Project water contractors over what they would have been charged if the State had not conveyed Central Valley Project water pursuant to this agreement, provided that the United States shall not be responsible for payment for any additional power demand charges that may result from pumping Central Valley Project water pursuant to subarticle 10(b). At present, the only incremental costs identified by the State are the replacement portions of the minimum and variable components of both the Delta Water Charge and Transportation Charge, as defined in

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the November 4, 1960, State Water Supply Contract with The Metropolitan Water District of Southern California, as it now exists and may hereafter be amended. Incremental costs in 1985 amounted to $0.21 per acre-foot of water conveyed.

(c) The State agrees to give priority to the United States to convey Central Valley Project water for scheduled or unscheduled maintenance and unforeseen outages of the Central Valley Project, from the Delta to O'Neill Forebay, not covered in subarticles 10(b) and 10(d), through the California Aqueduct Reaches 1, 2A, and 2B facilities at times that such conveyance does not reduce use of the State's facilities for the benefit of the State's long-term water supply contractors subject to the following:

(1) The United States will supply the power required to pump Central Valley Project water through the Harvey O. Banks Delta Pumping Plant;

(2) The State will be reimbursed for each of the following charges expressed as a unit rate and applied to each acre-foot of water conveyed. These charges will equal the sum of the components of the water charges for California Aqueduct Reaches 1, 2A, and 2B as defined in the State Water Supply Contract with the Metropolitan Water District of Southern California, dated November 4, 1960, as it now exists and may hereafter be amended.

(i) The capital component of the transportation charge.

(ii) The minimum component of the transportation charge.

(iii) The replacement portion of the variable component of the transportation charge.

(iv) The capital component of the Delta water charge.

(v) The minimum component of the Delta water charge.

These charges for 1985 total $8.44 per acre-foot of water conveyed.

(d) In consideration for the conveyance of State Water Project water for scheduled or unscheduled maintenance and unforeseen outages from the Delta to O'Neill Forebay through Central Valley Project facilities, the State will convey for the United States an equal quantity of Central Valley Project water measured in acre-feet through its facilities at no charge; Provided, that such conveyance of Central Valley Project water shall be accomplished, if possible, within 12 months from the date conveyance of State Water Project water was completed. Each agency shall be responsible for supplying the power required to pump its water.

--Article 10--

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(e) The State, in an annual letter to the United States, will transmit the charges referred to in subarticles 10(b)(2) and 10(c)(2) above based upon the cost components listed therein.

(f) The State will submit invoices to the United States on or before June 30 of the year following the year in which the wheeling occurs. The United States will make payment within 30 days after receipt of such invoice.

(g) Prior to December 31 of the fifth full year following the execution of this agreement, the parties will agree upon the amount and value of the services each project has provided to the other project prior to the execution of this agreement and will agree upon the manner in which any imbalance is to be resolved. This subarticle shall not apply to services provided under a separate written agreement.

(h) (1) The parties shall promptly commence negotiating a contract for the conveyance and purchase of Central Valley Project water to assist each party in making more efficient use of the water project facilities and water supplies contemplated in this agreement. The terms and conditions of said contract shall be no less favorable to either party than the terms and conditions either party would make available to their respective long-term contractors, except as specified by this subarticle.

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(2) The contract referred to in subarticle 10(h)(1) shall provide for, among other things, the sale of Central Valley Project water to the State for use by State Water Project contractors on the following conditions:

(i) When the Central Valley Project water sold to the State is needed by existing or new long-term Central Valley Project contractors, it shall be recalled by the United States for such contractors;

(ii) The United States shall impose deficiencies on water purchased by the State in a manner consistent with Exhibit E.

(3) The contract referred to in subarticle 10(h)(1) shall further provide for, among other things, the United States purchase of State Water Project conveyance services for transport of Central Valley Project water to Central Valley Project contractors on the following conditions:

(i) The State shall transport Central Valley Project water for the United States up to the amount of Central Valley Project water made available to the State for purchase each year on the same priority as water transported for State Water Project long-term contractors;

(ii) In addition, the United States shall have the first right to purchase all conveyance services that are in excess of the services being used to transport water

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developed or purchased by the State or the State Water Project contractors. The conveyance of Central Valley Project water shall not diminish deliveries or increase costs of water supplies developed or purchased by the State or the State Water Project contractors.

(4) The parties recognize that to fully implement this agreement, the parties may be required to seek amendments to existing water rights permits or additional water rights permits for, (i) an additional point of diversion and rediversion at the State's Harvey O. Banks Delta Pumping Plant and the United States Tracy Pumping Plant; and (ii) consolidation and expansion of place of use. The State shall support the petition of the United States.

(5) At any time after December 31, 1988, if either party shall not have received all of the amendments or permits described in subarticle 10(h)(4) and which contain conditions satisfactory to that party, then that party may terminate this agreement on 180 days written notice, or utilize the provisions of subarticle 14(b)(2) to seek a resolution of its concerns.

DELTA STANDARDS

11. (a) The Central Valley Project and the State Water Project will be operated in conformity with the Delta standards in Exhibit A. Should the State Water Resources

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Control Board establish new Delta standards, and the United States determines that operation of the Central Valley Project in conformity with the new Delta standards is not inconsistent with Congressional directives the parties shall amend Exhibit A to conform with the new Delta standards and amend this agreement to the extent necessary to provide for continued operation of both projects to accomplish the purposes of this agreement.

(b) Should the United States determine that the new Delta standards are inconsistent with Congressional directives then the United States shall promptly request the Department of Justice to bring an action for the purpose of determining the applicability of the new Delta standards to the Central Valley Project.

(c) The United States reserves the right to seek, at any time, the enactment of legislation regarding the operation of the Central Valley Project, including compliance with new Delta standards, which may supersede any final court decisions addressed in subarticle 11(b).

(d) The parties do not intend by this agreement to confer any additional authority upon either the Secretary of the Interior or the State Water Resources Control Board beyond that derived from applicable statutory and decisional law.

--Article 11

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PERIODIC REVIEW

14. (a) Prior to December 31 of the fifth full year following execution of this agreement, and before December 31 of each fifth year thereafter, or more frequently if so requested by either party, the United States and the State jointly shall review the operations of both projects. The parties shall (1) compare the relative success which each party has had in meeting its objectives, (2) review operation studies supporting this agreement, including, but not limited to, the assumptions contained therein, and (3) assess the influence of the factors and procedures of Article 6 in meeting each party's future objectives. The parties shall agree upon revisions, if any, of the factors and procedures in Article 6, Exhibits B and D, and the Operation Study used to develop Exhibit B.

(b) (1) If the parties fail to enter into the contract referred to in subarticle 10(h)(1) by December 31, 1988, either party may give written Notice of Negotiation to the other party. Within 30 days of such notice, each party shall designate one member of an Advisory Board to which that problem shall be referred. The members designated by the parties shall choose a third member who shall act as chairperson. The Board shall report its unanimous recommendation to both parties with respect to all terms and conditions to be

included in said contract at a date not later than 12 months from the date of the Notice of Negotiation. The parties shall immediately implement that recommendation. If the Board fails to made a unanimous recommendation within the 12-month period, either party may unilaterally terminate this agreement.

(2) If the parties are unable to agree on changes to this agreement, or either party fails to receive all of the amendments or permits described in Article 10(h)(4), either party may give written Notice of Negotiation. If agreement satisfactory to both parties has not been reached within 12 months of such Notice, each party shall designate within 30 days one member of an Advisory Board to which the problem shall be referred. The members designated by the parties shall choose a third member who shall act as chairperson. The Board shall report its unanimous recommendations to both parties at a date not later than 24 months from the date of the Notice of Negotiation and the parties shall amend this agreement and immediately begin to operate in accordance with said recommendations. If the Board fails to make unanimous recommendations within the 24-month period, either party may unilaterally terminate this agreement.

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RELATION TO AGREEMENT OF MAY 16, 1960

15. This agreement suspends the Agreement of May 16, 1960, and said Agreement of May 16, 1960, shall be of no force and effect whatsoever so long as this agreement remains in force. Should this agreement be terminated for any purpose, the Agreement of May 16, 1960, shall automatically become effective with both parties reserving their respective rights regarding the interpretation of the provisions thereof.

NEW FACILITIES

16. Any yield created by the construction of a new facility (not presently existing) by either party shall be attributed to the party constructing the new facility, and will require a review as provided for in Article 14. To the extent that water is exported outside the drainage of the Sacramento, Mokelumne, and Calaveras Rivers, the facilities used to convey such water shall be considered as export facilities for the purposes of Article 5.

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PROJECT SERVICE AREAS

17. The State and the United States agree that they will respect each others project service areas as defined by long-term contracts of either agency for the furnishing of water.

THIRD PARTY RIGHTS UNAFFECTED

18. Nothing in this agreement is intended to define, determine, limit, or affect the rights of third parties.

EFFECT OF WAIVER OF BREACH

19. The waiver of a breach of any of the provisions of this agreement shall not be deemed to be a waiver of any other provisions hereof or of a subsequent breach of such provisions.

EQUAL EMPLOYMENT OPPORTUNITIES

20. During the performance of this agreement, the State agrees as follows:

(a) It will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. It will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment,

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upgrading, demotion, or transfer; recruiting or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. It agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this Equal Opportunity clause.

(b) The State will, in all solicitations or advertisements for employees placed by or on its behalf, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(c) The State will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice, to be provided by the agency Contracting Officer, advising the labor union or workers' representative of the State's commitments under this Equal Oportunity clause, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The State will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The State will furnish all information and reports required by said Executive Order, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Bureau of Reclamation and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the State's noncompliance with the Equal Opportunity clause of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part, and it may be declared ineligible for further Government contracts in accordance with procedures authorized in said Executive Order, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The State will include the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246, so that such provisions will be binding upon each subcontractor or vendor. It will take such actions with respect to any subcontract or purchase order as the Contracting

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Officer may direct as a means of enforcing such provisions, including sanctions for noncompliance; Provided, however, That in the event the State becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Contracting Officer it may request the United States to enter into such litigation to protect the interests of the United States.

CONTINGENT PROVISIONS

21. Performance by the State and the United States shall be contingent on: (1) the availability of Federal funds therefor; and (2) the availability of State funds therefor.

OFFICIALS NOT TO BENEFIT

22. (a) No member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise herefrom. This restriction shall not be construed to extend to this agreement if made with a corporation for its general benefit.

(b) No official of the State shall receive any benefit that may arise by reason of this agreement other than as a landowner within the Project and in the same manner as other landowners within the Project.

--Articles 20 - 22

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IN WITNESS WHEREOF, the parties hereto, by their respective officers thereunto duly authorized, have duly executed this supplement on the day and year first hereinabove written.

THE UNITED STATES OF AMERICA

By _____
Regional Director, Mid-Pacific Region
Bureau of Reclamation

DEPARTMENT OF WATER RESOURSES OF
THE STATE OF CALIFORNIA

By _____
Director
Department of Water Resources

Signature Clause

STANDARDS
FOR THE SACRAMENTO-SAN JOAQUIN DELTA 1/

BENEFICIAL USES PROTECTED AND LOCATION	PARAMETER	DESCRIPTION	YEAR TYPE	VALUES
MUNICIPAL AND INDUSTRIAL				
Contra Costa Canal Intake at Pumping Plant No. 1	Chloride	Maximum Mean Daily Cl in mg/l	All	250
Contra Costa Canal Intake At Pumping Plant No. 1 or Antioch Water Works Intake on San Joaquin River	Chloride	Maximum Mean Daily 150 mg/l Chloride for at least the number of days shown during the Calendar Year. Must be provided in intervals of not less than two weeks duration (% of Year shown in parenthesis)		Number of Days Each Calendar Year Less than 150 mg/l Chloride
			Wet	240 (66%)
			Ab. Normal	190 (52%)
			Bl. Normal	175 (48%)
			Dry	165 (45%)
			Critical	155 (42%)
City of Vallejo Intake at Cache Slough	Chloride	Maximum Mean Daily Cl^- in mg/l	All	250
Clifton Court Forebay Intake at West Canal	Chloride	Maximum Mean Daily Cl^- in mg/l	All	250
Delta Mendota Canal at Tracy Pumping Plant	Chloride	Maximum Mean Daily Cl^- in mg/l	All	250
AGRICULTURE				0.45 EC April 1 to Date Shown / EC from Date Shown 2/ to Aug. 15
WESTERN DELTA				
Emmaton on the Sacramento River	Electrical Conductivity	Maximum 14-day Running Average of Mean Daily EC in mmhos	Wet	Aug. 15 / —
			Ab. Normal	July 1 / 0.63
			Bl. Normal	June 20 / 1.14
			Dry	June 15 / 1.67
			Critical	— / 2.70

BENEFICIAL USES PROTECTED AND LOCATION	PARAMETER	DESCRIPTION	YEAR TYPE	VALUES	
				0.45 EC April 1 to Date Shown	EC from Date Shown 2/ to Aug. 15
AGRICULTURE					
WESTERN DELTA					
Jersey Point on the San Joaquin River	Electrical Conductivity	Maximum 14-day Running Average of Mean Daily EC in mmhos	Wet	Aug. 15	—
			Ab. Normal	Aug. 15	—
			Bl. Normal	June 20	0.74
			Dry	June 15	1.35
			Critical	—	2.20
INTERIOR DELTA					
Terminous on the Mokelumne River	Electrical Conductivity	Maximum 14-day Running Average of Mean Daily EC in mmhos	Wet	Aug. 15	—
			Ab. Normal	Aug. 15	—
			Bl. Normal	Aug. 15	—
			Dry	Aug. 15	—
			Critical	—	0.54
San Andreas Landing on the San Joaquin River	Electical Conductivity	Maximum 14-day Running Average of Mean Daily EC in mmhos	Wet	Aug. 15	—
			Ab. Normal	Aug. 15	—
			Bl. Normal	Aug. 15	—
			Dry	June 25	0.58
			Critical	—	0.87
FISH AND WILDLIFE					
STRIPED BASS SPAWNING					
Prisoners Point on the San Joaquin River	Electrical Conductivity	Average of mean daily EC for the period not to exceed	All	April 1 to May 5 0.55 mmhos	
Chipps Island	Delta Outflow Index in cfs	Average of the daily Delta outflow index for the period, not less than	All.	April 1 to April 14 6700 cfs	
Antioch Waterworks Intake on the San Joaquin River	Electrical Conductivity	Average of mean daily EC for the period, not more than	All	April 15 to May 5 1.5 mmhos	

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BENEFICIAL USES PROTECTED AND LOCATION	PARAMETER	DESCRIPTION	YEAR TYPE	VALUES	
FISH AND WILDLIFE					
STRIPED BASS SPAWNING					
Antioch Water Works Intake (continued)	Electical Conductivity (Relaxation Provision - replaces the above Antioch and Chippa Island Standard whenever the projects impose deficiencies in firm supplies. 3/	Average of mean Daily EC for the period, not more than the values corresponding to the deficiencies taken (linear interpolation to be used to determine values between those shown)	All - whenever the projects impose deficiencies in firm supplies. 3/	Total Annual Imposed Deficiency MAF	Apr. 1 to May 5 EC in mmhos
				0	1.5
				0.5	1.9
				1.0	2.5
				1.5	3.4
				2.0	4.4
				3.0	10.3
				4.0 or more	25.2
STRIPED BASS SURVIVAL					
Chippa Island	Delta Outflow Index in cfs	Average of the daily Delta outflow index for each period shown not less than		May 6-31	June / July
			Wet	14,000	14,000 / 10,000
			Ab. Normal	14,000	10,700 / 7,700
			Bl. Normal	11,400	9,500 / 6,500
			Subnormal Snowmelt	6,500	5,400 / 3,600
			Dry 4/	4,300	3,600 / 3,200
			Dry 5/ or Critical	3,300	3,100 / 2,900
SALMON MIGRATIONS					
Rio Vista on the Sacramento River	Computed net stream flow in cfs	Minimum 30-day running average of mean daily net flow		Jan.	Feb. 1-Mar. 15 / Mar. 16-June 30
			Wet	2,500	3,000 / 5,000
			Ab. Normal	2,500	2,000 / 3,000
			Bl. Normal	2,500	2,000 / 3,000
			Dry or Critical	1,500	1,000 / 2,000

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BENEFICIAL USES PROTECTED AND LOCATION	PARAMETER	DESCRIPTION	YEAR TYPE	VALUES		
FISH AND WILDLIFE						
SALMON MIGRATIONS				July	Aug.	Sept. 1 - Dec. 31
Rio Vista on the Sacramento River (continued)			Wet	3,000	1,000	5,000
			Ab. Normal	2,000	1,000	2,500
			Bl. Normal	2,000	1,000	2,500
			Dry or Critical	1,000	1,000	1,500
SUISUN MARSH				Jan.-May		Oct.-Dec.
Chipps Island at O&A Ferry Landing	Electrical Conductivity	Maximum 28-day running average of mean daily EC	Wet	12.5 mmhos		12.5 mmhos
			Ab. Normal	12.5 mmhos		12.5 mmhos
			Bl. Normal	12.5 mmhos		12.5 mmhos
			Dry or Critical	12.5 mmhos		15.6 mmhos
		(The 15.6 mmhos EC Standard applies only when project water users are taking deficiencies in scheduled water supplies 6/ otherwise the 12.5 mmhos EC remains in effect.)				
Chipps Island	Delta Outflow Index in cfs	Average of the daily Delta outflow index for each month, not less than values shown	Wet	February-May 10,000 cfs		
			Subnormal Snowmelt	February-April 10,000 cfs		
		Minimum daily Delta outflow index for 60 consecutive days in the period	Ab. Norm and Bl. Norm.	January-April 12,000 cfs		

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BENEFICIAL USES PROTECTED AND LOCATION	PARAMETER	DESCRIPTION	YEAR TYPE	VALUES
FISH AND WILDLIFE				
SUISUN MARSH				
Chipps Island (continued)	Delta Outflow Index in cfs	Average of the daily Delta outflow index for each month, not less than values shown	All (if greater flow not required by above standard) - whenever storage is at or above the minimum level in the flood control reservation envelope at two out of three of the following: Shasta Reservoir, Oroville Reservoir, and CVP storage on the American River	Jan.-May 4,600 cfs
OPERATIONAL CONSTRAINTS				
Minimize diversion of young striped bass from the Delta	Diversions in cfs	The mean monthly diversions from the Delta by the State Water Project (SWP) (Department) not to exceed the values shown.	All	May 3,000 / June 3,000 / July 4,600
		The mean monthly diversions from the Delta by the Central Valley Project (CVP) (Bureau), not to exceed the values shown.	All	May 3,000 / June 3,000
Minimize diversion of young striped bass into Central Delta		Closure of Delta cross channel gates for up to 20 days but no more than two out of four consecutive days at the discretion of the Department of Fish and Game upon 12	All - whenever the daily Delta outflow index is greater than 12,000 cfs	April 16-May 31

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BENEFICIAL USES PROTECTED AND LOCATION	PARAMETER	DESCRIPTION	YEAR TYPE	VALUES
FISH AND WILDLIFE				
OPERATIONAL CONSTRAINTS *				
Minimize cross Delta movement of Salmon		Closure of Delta Cross Channel gates (whenever the daily Delta outflow index is greater than 12,000 cfs)	All	Jan. 1-April 15

*To the extent that operational constraints on the Central Valley Project to minimize diversion of young striped bass from the Delta during May and June reduce Central Valley Project exports, the State will, through coordinated operations, transport for the United States an amount equal to such reductions during the year by direct diversion or by rediversion of stored Central Valley Project water through State Water Project facilities at such times that diversions don't reduce State Water Project yield.

FOOTNOTES

1/ Except for flow, all values are for surface zone measurements. Except for flow, all mean daily values are based on at least hourly measurements. All dates are inclusive.
2/ When no date is shown in the adjacent column, EC limit in this column begins on April 1.
3/ For the purpose of this provision firm supplies of the Bureau shall be any water the Bureau is legally obligated to deliver under any CVP contract of 10 years or more duration, excluding the Friant Division of the CVP, subject only to dry and critical year deficiencies. Firm supplies of the Department shall be any water the Department would have delivered under Table A entitlements of water supply contracts and under prior right settlements had deficiencies not been imposed in that dry or critical year.
4/ Dry year following a wet, above normal or below normal year.
5/ Dry year following a dry or critical year.
6/ Scheduled water supplies shall be firm supplies for USBR and DWR plus additional water ordered from DWR by a contractor the previous September, and which does not exceed the ultimate annual entitlement for said contractor.

NOTE: EC values are mmhos/cm at 25°C.

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YEAR CLASSIFICATION

Year classification shall be determined by the forecast of Sacramento Valley unimpaired runoff for the current water year (October 1 of the preceding calendar year through September 30 of the current calendar year) as published in California Department of Water Resources Bulletin 120 for the sum of the following locations: Sacramento River above Bend Bridge, near Red Bluff; Feather River, total inflow to Oroville Reservoir; Yuba River at Smartville; American River, total inflow to Folsom Reservoir. Preliminary determinations of year classification shall be made in February, March and April with final determination in May. These preliminary determinations shall be based on hydrologic conditions to date plus forecasts of future runoff assuming normal precipitation for the remainder of the water year.

YEAR TYPE	RUNOFF, MILLIONS OF ACRE-FEET
Wet 1/	equal to or greater than 19.6 (except equal to or greater than 22.5 in a year following a critical year). 3/
Above Normal 1/	greater than 15.7 and less than 19.6 (except greater than 15.7 and less than 22.5 in a year following a critical year). 3/
Below Normal 1/	equal to or less than 15.7 and greater than 12.5 (except in a year following a critical year). 3/
Dry	equal to or less than 12.5 and greater than 10.2 (except equal to or less than 15.7 and greater than 12.5 in a year following a critical year). 3/
Critical	equal to or less than 10.2 (except equal to or less than 12.5 in a year following a critical year). 3/

1/ Any otherwise wet, above normal, or below normal year may be designated a subnormal snowmelt year whenever the forecast of April through July unimpaired runoff reported in the May issue of Bulletin 120 is less than 5.9 million acre-feet.

2/ The year type for the preceding water year will remain in effect until the initial forecast of unimpaired runoff for the current water year is available.

3/ "Year following critical year" classification does not apply to Agricultural, Municipal and Industrial Standards.

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EXHIBIT B-1

CENTRAL VALLEY PROJECT AND STATE WATER PROJECT ANNUAL SUPPLIES
(all figures are in thousands of acre-feet)

	Central Valley Project	State Water Project		Total
SACRAMENTO BASIN USE				
Sacramento River below Shasta	2,934	Feather River below Oroville	993	
American River Basin	200		—	
Subtotal	3,134		993	4,147
EXPORT				
Tracy Pumping Plant	3,113	Delta Pumping Plant	2,674	
Contra Costa Pumping Plant	90			
Cross Valley Canal	128			
Incremental Supply	432			
Subtotal	3,762		2,674	6,436
DELTA AREA AND OUTFLOW (JOINT RESPONSIBILITY)				4,986
		TOTAL		15,569

Notes: (1) Annual supplies are based on operation study USCAL-2-82. (1928-1934 critical period)

(2) Annual supplies in some cases include both water right entitlements and project supplemental water.

(3) The listing of annual supplies by service areas is not intended to restrict the place of use of either party.

(4) Cross Valley Canal supply relies on transport through State Water Project facilities.

(5) Incremental supply is developed from remaining storage in Central Valley Project reservoirs at the end of the 1928-1931 critical period and could be made available in the Delta on a firm basis with allowable (25%) deficiencies in critical years. It would require transport through State Water Project facilities.

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EXHIBIT B-2

CENTRAL VALLEY PROJECT AND STATE WATER PROJECT FULL DEVELOPMENT ANNUAL SUPPLIES
(all figures are in thousands of acre-feet)

	Central Valley Project		State Water Project		Total
SACRAMENTO BASIN USE					
Sacramento River below Shasta	3,381		Feather River below Oroville	1,031	
American River Basin	1,132				
Subtotal	4,513			1,031	5,544
DELTA					
Tracy Pumping Plant	3,284		Delta Pumping Plant	2,039	
Contra Costa Pumping Plant	195				
Cross Valley Canal	128				
Incremental Supply	154				
Subtotal	3,741			2,039	5,800
DELTA AREA AND OUTFLOW (JOINT RESPONSIBILITY)					4,918
		TOTAL			16,262

Notes: (1) Figures are illustrative of annual supplies obtainable under the assumptions of operation study DWRAL-3-82 (1928-1934 critical period) which assumes full development with existing facilities.

(2) Annual supplies in some cases include both water right entitlements and project supplemental water.

(3) The listing of annual supplies by service areas is not intended to restrict the place of use of either party.

(4) Cross Valley Canal supply relies on transport through State Water Project facilities.

(5) Incremental supply is developed from remaining storage in Central Valley Project reservoirs at the end of the 1928-1934 critical period and could be made available in the Delta on a firm basis with allowable (25%) deficiencies in critical years. It would require transport through State Water Project facilities.

(6) American River Basin Supply includes 120 thousand acre-feet for Placer County Water Agency water rights. It is assumed delivered above Folsom.

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EXHIBIT C

MONITORING LOCATIONS

No.	*Station Identifier Code	State Location
1	RSAN032	San Joaquin River at San Andreas Landing
2	CHCCC06	Contra Costa Canal at P.P. #1
3	CHWST0	West Canal at mouth/intake to CCFB
4	RSNKL08	Mokelumne River at Terminous
5	SLCCH16	Cache Slough at City of Vallejo intake
6	RSAC075	Sacramento River at Chipps Island (Mallard Slough)
7	RSAN007	San Joaquin River at Antioch
8	RSAN018	San Joaquin River at Jersey Point
9	RSAC092	Sacramento River at Emmaton
10	CHDMC006	Delta Mendota Canal
11	RSAC101	Sacramento River at Rio Vista
12	RSAC139	Sacramento River at Greens Landing
13	ROLD14	Old River at Holland Tract
14	RSAC081	Sacramento River at Collinsville
15	RSAN112	San Joaquin River at Vernalis
16	B9D801.9 143.2	San Joaquin River at Blind Point
17	**D29	San Joaquin River at Prisoners Point
18	B7D802.0 137.2	Piper Slough at Bethel Island

Unless otherwise agreed, a continuous electrical conductivity (EC) recorder shall be maintained at all of the sites listed above except for the San Joaquin River at Prisoners Point (D29) where only a weekly EC measurement is required between April 1 and May 5 of each year.

*Station Identifier Code used in the Environmental Protection Agency STORET data base.

**Bureau of Reclamation station identifier code. STORET code not available.

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Exhibit D
Exchange Procedure to Provide D-1485 Condition 3
Replacement Water (Article 10b of COA)

The California State Water Resources Control Board (SWRCB) Decision 1485 (D-1485) restricts exports from the Delta by the Central Valley Project (CVP) and the State Water Project (SWP) during May and June of each year by limiting each project to a mean monthly export of 3,000 ft3/s. However, Condition 3 of D-1485[1] allows the CVP to make up any deficiency caused by the limitation by exporting at SWP facilities (Condition 3 water). In an effort to minimize the impact of the limitation on CVP and SWP power operations and unless otherwise agreed, this exchange procedure will be followed.

During May and June of each year the CVP shall have the option to provide and the SWP will accept an amount of energy on a mutually agreed upon schedule sufficient to pump some or all Condition 3 water at H. O. Banks Delta Pumping Plant (Banks). Operation under this procedure shall not cause export from the Delta in excess of that shown in Exhibit A. Any energy supplied by the CVP under this procedure will be used for pumping of SWP water at Banks and/or any joint CVP-SWP pumping facility during May and June. Such energy shall be converted to dollars at the then current value of SWP energy and credited to a CVP exchange account (account). During months other than May and June, the SWP shall pump Condition 3 water for the CVP utilizing the account to cover

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[1] To the extent that operational constraints on the Central Valley Project to minimize diversion of young striped bass from the Delta during May and June reduce project exports, permittee, the United States Bureau of Reclamation, shall be allowed through coordinated operations to make up such deficiencies during later period of the year by direct diversion or by rediversion of releases of stored water through State Water Project facilities.

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the cost of associated pumping energy at Banks at the then current value of energy to the SWP. For accounting purposes all Condition 3 water shall be deemed to have been pumped at Banks at a rate of 297 KWH/AF. This rate is based on the rated efficiency of the pumping plant. Any change in the rated efficiency of the pumping plant will result in a correlative change in this KWH/AF rate at Banks.

The CVP shall have the option to convey all Condition 3 water through SWP facilities during July and August. However, it is recognized that the value of energy is time dependent. Therefore, it is likely that the value of energy to pump an amount of water in May and June will be different than the value for pumping an equal amount of water at other times of the year. Prior to April 1 of each year operators of the SWP shall estimate the value of off-peak and on-peak energy for each week of the following twelve months. Prior to April 20 the CVP operators in coordination with the SWP operators shall determine how much CVP energy can be provided for SWP pumping during the May-June period. In the event that the account balance is insufficient to purchase the necessary energy for pumping all Condition 3 water, the CVP may provide and SWP will accept additional energy needed to effect full recovery of Condition 3 water. In the event that the entire quantity of Condition 3 water is received by the CVP prior to the depletion of the account, the SWP shall credit the CVP with energy for additional pumping at Banks Pumping Plant or any joint CVP-SWP pumping facility until the account reaches a zero balance each year.

EXHIBIT E

WATER SHORTAGE AND APPORTIONMENT

1. (a) In its operation of the Central Valley Project (CVP), the United States will use all reasonable means to guard against a condition of shortage in the quantity of water available to the State pursuant to this contract. Nevertheless, if a shortage does occur during any year because of drought, or other causes which, in the opinion of the Contracting Officer, are beyond the control of the United States, no liability shall accrue against the United States or any of its officers, agents, or employees for any damage, direct or indirect, arising therefrom.

(b) In any year that the Contracting Officer determines there is a shortage in the quantity of water available to customers of the United States from the CVP, the Contracting Officer will apportion available water among the water users capable of receiving water from the same CVP facilities by reducing deliveries to all such water users by the same percentage, unless he is prohibited by existing contracts, CVP authorizatons, or he determines that some other method of apportionment is required to prevent undue hardship. In the event reduced deliveries are necessary, the water supplies for both municipal and industrial use, and agricultural use shall be reduced by the same percentage for each contractor.

(c) If operation of the CVP to meet legally required Delta water quality control standards, including Federally adopted water quality standards, causes a shortage in water supply and requires a reduction in deliveries of water to the State under this agreement, such reductions will be made in accordance with subdivision (b) of this exhibit and shall not be deemed a breach hereof.

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Highlights of the Agreement

The COA is important to water resource development by the two projects in certain critical ways:

- It commits both the Central Valley Project and the State Water Project to meeting water quality and outflow standards for the Delta that are equivalent to the standards contained in the State Water Resources Control Board's Decision 1485.
- It establishes mutually recognized annual water supplies of the two projects.
- And it provides guiding principles for cooperative utilization of the facilities of the two projects through the wheeling and sale of water.

Delta Water Quality and Outflow Standards

The Bureau has binding legal commitments to meet specified Delta water quality standards as stated in the water quality provisions of its water rights exchange contracts with water users in the lower San Joaquin basin. In these contracts, the Bureau has agreed to supply specified qualities of water at its Tracy Pumping Plant. The Tracy standards are less stringent and more limited than those set forth in Decision 1485. The history of the CVP has been to operate only for these "Tracy standards" in an extreme drought year.

However, the State Water Resources Control Board has held the Central Valley Project and State Water Project jointly and severally responsible for maintaining Delta standards. Any possibility that the Central Valley Project will not be operated to provide its share of the water needed to meet these standards represents a serious threat to the State Water Project. The

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Department of Water Resources might have to provide any additional water necessary to meet the standards with the State Water Project's limited and already fully committed water supplies, or petition the Water Resources Control Board for relief. The current Agreement eliminates this potential dilemma by mutually committing the two projects to meeting the Decision 1485 Delta standards.

Annual Water Supplies

The Agreement establishes mutually recognized annual water supplies of the Central Valley Project and State Water Project, in Exhibit B-1 for 1980 and in Exhibit B-2 for 2020. These supplies were computed using mathematical procedures wherein the operational capabilities of the two projects are superimposed on sets of conditions representing a level of development (year), demand for water from the projects, and naturally occurring hydrology.

The water supply computations reflect a "first in time" principle that is a key element of the Agreement. Under this principle, the CVP facilities built before the State Water Project existed are recognized as having whatever water supply yield they would have if the later project had not been built. The San Luis Unit of the CVP and the facilities of the State Water Project have equal claims on the remaining water, since the San Luis Unit is a jointly constructed facility of the two projects and was a later addition to the CVP.

The supplies computed for 1980 in Exhibit B-1 5.9 million acre-feet for the Central Valley Project and 3.7 million acre-feet for the State Water Project, were used to derive the sharing formulae of Article 6. The

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55:45 formula apportions the shares of Sacramento Valley demands which must be met by the CVP and the SWP, respectively. This formula was carried over from the previous draft Coordinated Operation Agreement and was regarded by negotiators for both agencies as fair; CVP can serve a much larger portion of the demand in the Sacramento basin and has contracted with the water users in that area for this purpose. The 55:45 formula allows the projects to achieve the 1980-level supplies of Exhibit B-1 during a drought, such as occurred from 1923 to 1934. This formula apportions the CVP's and SWP's shares of water available for export from the Delta or storage in lieu of such exports. Both formulae are empirically derived and are to be used on a daily basis to ensure appropriate allocation of annual supplies.

The supplies computed for the year 2020 and displayed in Exhibit B-2 are illustrative of how much water each project may have at that development level under certain principles and assumptions accepted by negotiators of the Agreement. Central Valley Project supplies are higher for 2020 than for 1980 because for the 2020 level it is assumed that the CVP is making full use of water it can rightfully claim and deliver to existing or potential contractors without new yield-augmenting facilities. State Water Project supplies are lower for 2020 than for 1980, partly because much of the CVP increase in supply over the same time span represents water that the SWP was using at the 1980 level. The State Water Project was using this water because the Central Valley Project lacked either the demand for it or the means to deliver it. As Central Valley Project demands and deliveries increase upstream from the Delta, less water reaches the Delta for export by the State Water Project.

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The CVP year 2020 annual supply stated in Exhibit B-2 may be reduced by the commitment of additional water for fish protective flows in the Trinity River. Such an allocation is subject to the exercise of Secretarial discretion based on studies currently underway to find ways to restore Trinity River fisheries.

By quantifying water supplies, Exhibits B-1 and B-2 (particularly B-2) reflect the intention that the Central Valley Project will enter into new contracts. The Central Valley Project will be able to utilize its full year 2020 water supply by completing a marketing program to meet authorized service area needs.

The new Coordinated Operation Agreement would not in and of itself trigger any new contracts; each contract would be a separate and independent action subject to studies on water availability and evaluation of potential environmental impacts.

Wheeling Arrangements

At times each project requires water conveyance services, or wheeling, available through the other project's facilities. Article 10 of the new Agreement provides for wheeling in all situations. These situations occur: during times of planned or unplanned project maintenance; whenever the Central Valley Project curtails export pumping at the Delta during May and June to minimize the effects of such pumping on young striped bass; at times when the CVP has sold water to the State and the State has agreed to

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wheel an equivalent amount of CVP water for CVP contractor use; and whenever the SWP has excess capacity available and the CVP needs to wheel water for other purposes.

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SUMMARY OF COORDINATED OPERATION AGREEMENT ARTICLES

Article 1, Preamble

Names the parties to the Agreement, the U.S. Bureau of Reclamation and the Department of Water Resources, and leaves blank a citation of an act of Congress that is proposed to be enacted authorizing the Bureau of Reclamation to sign the Agreement.

Article 2, Explanatory Recitals

Gives background information and establishes the positions of the parties as they enter the Agreement.

Article 3, Definitions

Defines terms used in Article 6, Coordination of Operations. The terms used to describe "balanced water conditions," "excess water conditions," "United States storage withdrawal" and "State storage withdrawal" are all discussed in Article 6. These definitions are complicated, but their underlying principle is simple: a storage withdrawal occurs when water is being drawn out of a reservoir or system of reservoirs at a higher rate than it is flowing in. An exception to this principle is made for water flowing into Whiskeytown Lake (CVP) through Judge Francis Carr Powerplant. This water is imported to the Sacramento Valley basin from the Trinity River via the Clear Creek Tunnel, and it is not counted as inflow to Whiskeytown Lake. In effect, all of the water imported to the Sacramento Valley basin is counted as storage withdrawal.

Article 4, Term of Agreement

Gives the Agreement an indefinite term; i.e., the Agreement remains in force until mutually terminated by the parties, or unilaterally terminated in the process provided by Articles 10 and 14.

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Article 5, Facilities

Identifies the existing features of the Central Valley Project and State Water Project that are recognized in the Agreement. The addition of any facilities to the operation of either project will require amendment of the Agreement after a periodic review as described in Article 14.

Article 6, Coordination of Operations

This article is the heart of the Agreement and merits thorough explanation. It specifies how, and in what proportions, the two projects will:

- Share available water supplies;
- Share responsibilities to maintain Sacramento Valley inbasin use.

The sharing of water supplies and responsibilities is controlled by what was known during the negotiating process as "the sharing formula." This formula was arrived at through studies in which the two projects were operated (on paper) to produce the 1980-level project supplies detailed in Exhibit B-1.

The sharing formula is structured around the need to meet the inbasin use requirements. Inbasin uses are all uses of water of the Sacramento River system in the Sacramento Valley and the Delta, which includes the Delta outflow and water quality requirements specified by Exhibit A of the Agreement. The Exhibit A requirements, extracted from State Water Resources Control Board Decision 1485, vary according to year types classed as "wet, above normal, below normal, dry, and critical", and according to time of year within the year types.

The amount and timing of inbasin use requirements is not known to or controlled by the project operators and cannot be readily measured. However, the Delta is downstream from all other inbasin uses, and compliance with the Exhibit A

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requirements or "standards" for the Delta can be monitored. If the Exhibit A standards are being met, all other inbasin use requirements are being met, because the Delta gets only the water that remains after upstream uses have been satisfied.

When water is plentiful in the Sacramento River system, the projects can store and export water to their full capabilities, and inbasin use requirements will still be met. But as runoff subsides, a time comes when water must be allocated among the two projects and inbasin uses. This time is signaled when conditions in the Delta approach the Exhibit A standards. When the Delta reaches Exhibit A conditions, known as "balanced water conditions," the Bureau and the Department operate their projects by the sharing formula to maintain those conditions. Balanced water conditions occur in all but a few very wet years. Typically, balanced conditions begin in April or May and continue through October.

The projects have two mechanisms for maintaining balanced conditions: their reservoir releases and their Delta exports. Reservoir releases plus any other water that reaches the Delta must provide enough water to meet Exhibit A and export requirements. If Exhibit A is not met, the projects increase reservoir releases, reduce exports, or both.

There are two kinds of reservoir releases during balanced conditions:

- Pass-through flows, which occur when the rate of inflow to the reservoir equals or exceeds the rate of outflow, causing either no net change or a net increase in reservoir storage.

- Storage withdrawals, which occur when the rate of outflow from a reservoir exceeds the rate of inflow, causing a net decrease in reservoir storage (a use of water that had been stored).

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Sometimes, to maintain balanced conditions, the projects need only reduce either exports or the rate at which they are increasing reservoir storage; but as natural flows diminish, they must start making storage withdrawals to sustain their exports and provide the water required for inbasin uses.

The sharing formula of the proposed Agreement is really two formulas for two different situations that occur during balanced water conditions. One formula apportions the responsibility for making storage withdrawals to supply inbasin uses when flow other than from storage withdrawals (unstored flow) is insufficient to provide the full supply required to meet Exhibit A standards and Delta export demands. The formula for sharing this responsibility is:

Central Valley Project	75 percent
State Water Project	25 percent

The other formula defines the rights of the two parties to store or export water when unstored flow is available in excess of inbasin use requirements (including Exhibit A). The formula for sharing this water is:

Central Valley Project	55 percent
State Water Project	45 percent

The formulas are applied on a daily basis.

Figure 2 is a simplified graphic illustration of how the formulas operate--simplified in that is assumes a smooth decline and buildup of runoff, constant levels, and constant inbasin use requirements. The left side of the figure represents conditions as they might exist in the spring, when periods of balanced conditions often begin: project exports plus additions to project storage take all the unstored flow that is excess to inbasin use requirements.

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They take it both by exporting from the Delta and storing in their reservoirs. The Central Valley Project is entitled to 55 percent of the available excess; the State Water Project to 45 percent.

As unstored flow declines with decreasing runoff, additions to project storage must decrease to maintain exports and inbasin uses. On a certain day, represented by line A-A' on Figure 2, no water is available to add to storage, and withdrawals from storage must begin thereafter to maintain exports. Until the day represented by line B-B', each project may export an amount of water equal to its storage withdrawal plus its share (as determined by the 55:45 formula) of unstored flow in excess of inbasin use requirements.

On day B-B', there is no longer any excess unstored flow to contribute to exports or to be shared 55:45, and exports equal storage withdrawals. Thereafter, storage withdrawals must be increased to exceed exports in the amount that allows inbasin use requirements to be fully met. The responsibility to make such storage withdrawals for inbasin uses is borne by the Central Valley Project and State Water Project in the proportions 75:25. While the 75:25 formula is in effect, both projects are entitled to export an amount equal to their storage withdrawals, less their allocated contributions to inbasin use.

As unstored flow increases in the fall and early winter, the steps are reversed. The early increases in unstored flow eliminate the need for storage withdrawals to meet inbasin uses, and the 75:25 formula goes out of effect. The 55:45 formula then takes over to apportion excess unstored flow. Finally, when unstored flow exceeds the sum of inbasin uses, exports, and additions to storage, and neither formula is needed; "excess water conditions" exist.

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In actual operation, the progression of events would not be so smooth as is indicated by Figure 2. Inbasin use requirements change throughout the year, as do export levels, and runoff varies in a less regular pattern. Applied on a daily basis, the formulas are able to take these variations into account. Table 1 illustrates operation of the sharing formula through a period of balanced water conditions, with exports, storage, inbasin uses, and unstored flows all varying. The table condenses an entire period of balanced conditions into 6 representative days, illustrating how the sharing formula operates and how records would be kept to assure that water and responsibilities are being shared according to the formula.

The sharing formula (meaning one formula or the other) applies unless one project's storage withdrawal or unstored flow available for export exceeds its export capability. In this event, the excess storage withdrawal or unstored flow may be exported by the project that has the capability to do so, without affecting either project's future responsibilities or daily balance.

Article 7, Forecasting

Requires each party to furnish to the other, upon request, a forecast of operations.

Article 8, Water Measurement Responsibilities

Requires that the measurements necessary to implement Article 6 by made by each party.

Article 9, Reduction in United States and State Exports

Provides that the two parties shall discuss measures to minimize water shortages for export users whenever such shortages are forecast.

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Article 10, Exchanges, Wheeling and Purchases of Water Supply

Generally specifies arrangements applicable to certain situations when one project's water is conveyed ("wheeled") through the other project's facilities.

10(a) Each project may, by written agreement, make its facilities available to the other project for the pumping and conveyance of water.

10(b) The State agrees to wheel for the United States to ease the potential impact of the May-June export limitations of Exhibit A on Central Valley Project operations. The State requires that the United States supply power for this wheeling according to Exhibit D and to pay minimum charges. In 1985 these charges would have been $0.21 per acre-foot of water conveyed or about $41,000.

10(c) The State also agrees to wheel for the United States when the Central Valley Project export facilities from the Delta to O'Neill Forebay are inoperative due to scheduled or unscheduled maintenance, provided the United States supplies the power and pays certain additional charges. These charges are at the same rate as those charged to State contractors for the use of the facilities used to wheel Central Valley Project water. In 1985 this rate was $8.44 per acre-foot of water conveyed.

10(d) If the United States wheels for the State due to scheduled or unscheduled maintenance of State Water Project facilities, the State will repay the United States with wheeling services on an acre-foot per acre-foot basis.

10(e) Each year the State will notify the United States of the charges which will be made for wheeling during that year.

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10(f) Prior to June 30 of the year following the year in which wheeling services were provided, the State will bill the United States. The United States will make payment in 30 days.

10(g) Since the construction of the State Water Project, both projects have at various times provided wheeling services for the other projects during periods of scheduled or unscheduled maintenance. Services provided by the State to the United States exceed those services provided to the State by the United States. This subarticle requires that within 5 years of the execution of the Coordinated Operation Agreement, the parties agree to the amount and value of this imbalance in services rendered. The parties shall further agree on how this imbalance shall be resolved.

10(h) This subarticle requires the negotiation of a contract by December 31, 1988, for the sale of interim water to the State and purchase of conveyance services by the United States. The subarticle lay outs certain basic guidelines that are to be followed in the contract:

(1) Water sold to the State will be recallable when needed by Central Valley Project Contractors.

(2) During periods of water shortages, the United States will impose deficiencies on the water purchased by the State similar to those imposed on other Central Valley Project contractors.

(3) The State will provide conveyance services to the United States in an amount equal to the CVP water sold to the State. That water transported for the United States shall be at the same priority as the water transported by the State for its long-term contractors.

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(4) In addition to the conveyance service provided to the United States on an acre-foot transported per acre-foot sold basis, the United States shall have the right to purchase any conveyance services in excess of that being used by the State or the State Water Project contractors. Water recalled from the State's use and other CVP supplies, such as temporary water sold under the Reclamation Reform Act, would be transported under this provision.

In order to accomplish the goals of this agreement, certain modifications to existing water rights permits held by the State and the United States may be required. If satisfactory amendments or permits are not received, either party may terminate the agreement on 180 days written notice at any time after December 31, 1988.

Article 11, Delta Standards

Requires that the CVP and the SWP be operated in conformity with the Delta standards set forth in Exhibit A. If those standards are changed in the future, Exhibit A will be revised to conform to those new standards only if the United States determines that the operation of the CVP in conformity with those new standards is "not inconsistent with congressional directives". This test of conformity derives from the applicable case laws. The determination of consistency requires that the United States carefully evaluate it ability to comply with applicable Reclamation laws in meeting all CVP authorized puposes and repayment requirements while operating to meet the new standards. If the United States determines that operation of the CVP in conformity with those new standards is inconsistent with congressional directives, it will ask the Department of Justice to bring an action to determine the applicability of those new Delta

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standards co the CVP. Both parties preserve all rights, interests, and arguments they may have under existing laws and litigation and under any future litigation or laws which may become applicable.

Article 12, Monitoring

Exhibit C describes the monitoring activities for ensuring compliance with the Delta standards of Exhibit A. Article 12 provides that the parties will share equally the cost of such monitoring. It also provides for amendment of Exhibit C if necessary. Additional monitoring in the Delta and San Francisco Bay will be covered by separate agreements.

Article 13, Records

Allows each party full access to books and records of the other party insofar as they pertain to the Agreement.

Article 14, Periodic Review

Establishes general guidelines for joint review of operations of both projects. Such a review will occur every 5 years, or more frequently if requested by either party. The factors and procedures in Article 6, Exhibits B-1, B-2, and D, and the operations study used to develop Exhibits B-1 and B-2 will be revised when necessary. If the parties are unable to agree on revisions, or fail to enter into the contract described in Subarticle 10(h) by December 31, 1988, this article further specifies a negotiating procedure that includes a requirement to refer the problem to a 3-member Advisory Board. If the Board fails to make a unanimous recommendation within 24 months from the notice of negotiations in the case of the revisions, or 12 months for the contract, either party may unilaterally terminate the Agreement.

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Article 15, Relation to Agreement of May 16, 1960

Suspends the Agreement of May 16, 1960, so long as the new Agreement remains in force. Upon termination of the new Agreement, the May 16, 1960, agreement would automatically be reinstated.

Article 16, New Facilities

Establishes principles that any yield created by construction of a new facility will be credited to the party that constructs the facility, or to both parties in the case of a joint undertaking. When a new facility is constructed, a review of the Agreement is required pursuant to Article 14.

Article 17, Project Service Area

Each party will respect the other's project service areas.

Article 18, Third Party Rights Unaffected

The Agreement is not intended to affect the rights of third parties.

Article 19, Effect of Waiver of Breach

The rights of the parties under the Agreement are unaffected if either party fails to object to a breach of the Agreement by the other party.

Article 20, Equal Employment Opportunities

The State agrees to standard provisions regarding treatment of employees and prospective employees without regard to race, color, religion, sex, or national origin.

Article 21, Contingent Provisions

Conditions performance of the parties on availability of funds.

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Article 22, Officials Not to Benefit

None of the officials associated with the Agreement may derive private benefit therefrom.

Exhibits of the Agreement

This section reviews the three Exhibits of the Agreement.

Exhibit A

This is the set of flow and water quality standards that defines the Delta portion of inbasin use requirements. The standards are identical to the Delta water quality and flow standards of the State Water Resources Control Board's Decision 1485, except that the standards for Suisun Marsh which became effective in 1984 are omitted. The significance of Exhibit A is explained in the discussion of Article 6 and later in this chapter under "Analysis of Accomplishments of the Agreement."

Exhibits B-1 and B-2

These exhibits state annual water supplies for the Central Valley Project and State Water Project. Annual water supply is defined as the amount of water a project can deliver through a 7-year dry period such as occurred from 1928 to 1934, taking into account the allowable deficiencies. Deficiencies (delivery of less than the stated annual supply) are allowable in both projects as long as their total over the 7 years does not exceed 100 percent of the stated annual supply. In developing the annual water supply figures, the Central Valley Project was allowed no more than a 25 percent deficiency in any year. The State Water Project was allowed no more than a 50 percent deficiency for its agricultural contractors in any year and no deficiencies for municipal and industrial contractors.

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The significance of Exhibits B-1 and B-2 is discussed later in this chapter under "Analysis of Accomplishments of the Agreement." The detailed derivation of the annual water supply figures is the subject of a separate document, "Technical Report on Determination of Annual Water Supplies for Central Valley Project and State Water Project," dated March 1984, which is incorporated into this Agreement by specific reference.

Exhibit C

This exhibit specifies 18 locations in the Delta where electrical conductivity measurement stations will be maintained to monitor compliance with the Exhibit A standards. Electrical conductivity is a measure of the concentration of mineral salts in water.

Exhibit D

This is an exchange procedure for the United States to supply power to the State Water Project for wheeling of Central Valley Project water. The water wheeled with power supplied through this exchange procedure is limited to that amount of reduced Central Valley Project exports caused by the limitations of May and June exports in Exhibit A. This exchange procedure will be followed to minimize the impact of export limitations on Central Valley Project power operations.

Exhibit E

This exhibit describes the water shortage and apportionment language that will be included in any contract for the sale of water to the State by the United States. The exhibit is substantially the same as an article in Contract No. 7-07-20-W0023 between the United States and Santa Clara Water District.

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